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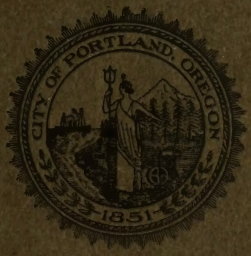
CITY OF PORTLAND
OREGON

MAYOR'S MESSAGE

AND

ANNUAL REPORTS

FOR THE FISCAL YEAR ENDING
NOVEMBER 30, 1915



CITY OF PORTLAND
OREGON

MAYOR'S MESSAGE

AND

ANNUAL REPORTS

FOR THE FISCAL YEAR ENDING
NOVEMBER 30, 1915

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Commission of Public Docks:
- Report not included herein. Copies may be obtained from the Commission of Public Docks, Municipal Dock No. 1, Foot of Stark Sreet.

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JUN 22 1918

ELECTIVE OFFICERS

		Time expires
Commissioner of Public Safety	Mayor H. R. Albee	July 1, 1917
Commissioner of Public Utilities	Will H. Daly	July 1, 1917
Commissioner of Public Works	R. G. Dieck	July 1, 1917
Commissioner of Finance	C. A. Bigelow	July 1, 1919
Commissioner of Public Affairs	Wm. L. Brewster	July 1, 1915
	George L. Baker	July 1, 1919
Auditor	A. L. Barbur	July 1, 1919

Meetings of Council are held Wednesday of each week at 10 A. M.

CIVIL SERVICE BOARD

George W. Caldwell, Chairman.
John F. Logan
A. E. Clark

COMMISSION OF PUBLIC DOCKS

F. W. Mulkey, Chairman
C. B. Moores
Ben Selling
Dan Kellaher
John H. Burgard

2 Jl 18 Div. of 1914/15 Cont.

MAYORS OF PORTLAND FROM 1851 TO 1915

Name.	Elected.
Hugh D. O'Bryant	April 7, 1851
A. C. Bonnell	April 5, 1852
Simon B. Marye	November 13, 1852
Josiah Failing	April 4, 1853
W. S. Ladd	March 15, 1854
George W. Vaughn	April 2, 1855
James O'Neill	April 7, 1856
James O'Neill	April 6, 1857
W. S. Ladd	November 4, 1857
A. M. Starr	April 5, 1858
S. J. McCormick	April 4, 1859
G. Collier Robbins	April 2, 1860
J. M. Breck	April 1, 1861
W. H. Farrar	April 7, 1862
David Logan	April 6, 1863
Henry Failing	April 4, 1864
Henry Failing	June 19, 1865
T. J. Holmes	November 26, 1866
T. J. Holmes	June 18, 1867
Aaron E. Wait	July 24, 1867
J. A. Chapman	July 31, 1867
Hamilton Boyd	June 16, 1868
B. Goldsmith	June 21, 1869
P. Wasserman	June 20, 1871
Henry Failing	June 16, 1873
J. A. Chapman	June 21, 1875
W. S. Newbury	June 18, 1877
D. P. Thompson	June 16, 1879
D. P. Thompson	June 20, 1881
J. A. Chapman	June 19, 1882
John Gates	June 15, 1885
Van B. DeLashmutt	May 2, 1888
Van B. DeLashmutt	June 18, 1888
W. S. Mason	June 15, 1891
George P. Frank	June 4, 1894
Sylvester Pennoyer	June 1, 1896
W. S. Mason	June 6, 1898
W. A. Storey	May 16, 1899
Henry S. Rowe	June 4, 1900
George H. Williams	June 2, 1902
Harry Lane	June 5, 1905
Harry Lane	June 3, 1907
Joseph Simon	June 7, 1909
A. G. Rushlight	June 5, 1911
H. R. Albee	June 2, 1913

MAYOR'S MESSAGE

To the Honorable Members of the City Council:

In accordance with the provisions of the Charter, herewith is submitted for your information and consideration, my third annual message, reports of the various bureaus in the Department of Public Safety and a copy of the annual budget for 1916.

During the year closed, the city has been remarkably free from disease. There have been no epidemics, the public health situation retaining its high standard unimpaired.

Financially, the city is in good condition and general business has been equal to that of the average American municipality at this time. The outlook seems much brighter and indications point to betterment for the ensuing twelve months.

During the year, action was taken by the Council, following my recommendation contained in the second annual message, looking toward the simplifying of the Efficiency Code. A new ordinance was passed which, I believe, will prove to be much better than the old one.

Owing to the unusual conditions prevailing, and it being necessary for the Council to exercise great economy, I find that my recommendation of last year as to an official publication for disseminating municipal news was not adopted for the 1916 budget, and the city, therefore, has no publication of its own. As the press does not, of necessity, carry many items of interest because of lack of space, it occurs to me that the Council should keep in mind the proposition of establisihng an agency of this kind. It was my idea to enlarge the present bulletin issued by the Bureau of Health and make of it a paper of general city information.

It is very unfortunate that in making up the 1916 budget, it was deemed necessary by the Council to drop out the appropriation of $25,000 for the detention home for women—a feature vitally needed in this community if we are ever to make progress along the line of helpfulness to those down-fallen creatures of our city. Having provided funds for a site, and the site having been purchased and the plans for the home completed, I cannot but feel that we have missed an excellent opportunity for real service in thus discontinuing the program. This is a subject which merits earnest consideration at the hands of the Council and should receive the assistance it deserves at the earliest possible time.

There have been some changes in the various boards and commissions under my appointment during the year. Owing to the fact that Hon. F. W. Mulkey declined to accept reappointment as a member of the Commission of Public Docks, I appointed in his stead Mr. F. C. Knapp. On the Civil Service Board, Mr. R. H. Thomas took the place of A. E. Clark, who felt that he could not well afford to serve the city another term.

It was deemed by the Council to be advisable to have an official Board of Motion Picture Censors and, consequently, an ordinance was passed creating the same, including a salary of not to exceed $100 for a

Secretary and expense for the work. The Board consists of Mrs. A. C. Newill, chairman; Mrs. E. B. Colwell, secretary; Mrs. A. M. Gray, Mrs. H. L. Vorse, F. T. Richards, Sol Baum and W. S. Wessling.

Viewers are appointed, who see all films, simply reporting thereon, and where there are no objections, reels are passed without delay. Where there is a question, the Board acts as a Court of Appeal and, as shown by the records, has considered all cases in a fair and impartial manner.

Yours very truly,

H. R. ALBEE,
Mayor and Commissioner of Public Safety.

ANNUAL REPORT

OF

THE DEPARTMENT OF PUBLIC SAFETY

FOR THE FISCAL YEAR ENDING
NOVEMBER 30, 1915

DEPARTMENT OF PUBLIC SAFETY

H. R. ALBEE
COMMISSIONER

BUREAU OF FIRE—
B. F. DOWELL, Chief
JAY W. STEVENS, Fire Marshal

BUREAU OF POLICE—
JOHN CLARK, Chief

BUREAU OF HEALTH—
M. D. MARCELLUS, M. D., Health Officer

MUNICIPAL COURT—
JOHN H. STEVENSON, Judge

POUND BUREAU—
BOYD R. WELCH, Poundmaster

HARBOR PATROL—
JACOB SPEIER, Harbormaster

BOARD OF MOTION PICTURE CENSORS—
MRS. E. B. COLWELL, Secretary

BUREAU OF FIRE

Hon. H. R. Albee, Mayor and Commissioner:

I respectfully submit the following report of the operation and expenditures of the Bureau of Fire for the year ending November 30, 1915, with such suggestions and recommendations as I deem necessary at this time, with other matters appertaining thereto of public interest.

The appropriation for the year, as per attached financial statement, was $708,282.62 and the expenditures $606,860.12, which include new equipment as follows: One American LaFrance aerial hook and ladder truck, one White auto tender for Fireboat Williams, one White auto Chemical engine, one Seagrave six-cylinder City service hook and ladder truck and one American LaFrance tractor, also 2,050 feet of 3½-inch hose, 6,250 feet of 2¾-inch hose, 4,750 feet of 2½-inch hose and 2,900 feet of 1½-inch hose.

General repairs to apparatus and houses have been made as necessity required and the personal property of the Bureau is in good condition with the exception of the houses of Engine and Truck Company No. 1 and Engine Companies 5, 6, and 20. In addition to what the Budget provides for in 1916 I recommend that provision be made in the near future for new buildings for the Companies above enumerated, also auto aerial hook and ladder trucks for Truck Company No. 5 and Engine Company No. 9.

The trend at this time in all large cities is toward eliminating horse-drawn apparatus entirely and replacing the same with auto equipment and earnest consideration should be given this matter when conditions will warrant the change.

A very interesting feature of this report is the progress made along the lines of fire prevention, and what has been accomplished under the supervision of Fire Marshal Jay W. Stevens and his corps of assistants, and too much credit cannot be given this branch of your department, as is attested by the high commendation of the general public.

I have endeavored to keep the expenses of the Bureau as low as possible without destroying its efficiency or causing complaint. I wish to thank you for your able and generous support at all times and hope I have deserved your confidence.

Very respectfully,

B. F. DOWELL,
Chief Engineer.

OFFICERS BUREAU OF FIRE

B. F. DOWELL, Chief Engineer.

M. LAUDENKLOS, First Assistant Chief Engineer.
(Fourth District, North of East Ankeny Street.)

JAY W. STEVENS, Second Assistant Chief Engineer and Fire Marshal.
(Third District, South of East Ankeny Street.)

LEE G. HOLDEN, Battalion Chief.
(First District, South of Morrison Street.)

JOHN E. YOUNG, Battalion Chief.
(Second District, North of Morrison Street.)

CHARLES A. SAVARIAU, Superintendent Fire Alarm Telegraph.

W. J. PHILLIPS, Master Mechanic.

ORGANIZATION OF BUREAU OF FIRE FOR YEAR ENDING NOVEMBER 30, 1915

Chief Engineer	1	Hydrantmen	2
Assistant Chief Engineers	2	Machinist	1
Battalion Chiefs	2	Instrument Maker	1
Chief Clerk	1	Blacksmith	1
Clerks	2	Plumber	1
Stenographer	1	Supply Driver	1
Auto Mechanician	1	Fire Boat Masters	2
Fire Escape Inspector	1	Fire Boat Engineers	6
Relief Engineers	2	Captains	36
Superintendent of Fire Alarm Telegraph	1	Lieutenants	44
Chief Operator	1	Steamer Engineers	19
Operators	6	Stokers, Truckmen, Hosemen and Pipemen	275
Linemen	4		
Master Mechanic	1	Total	417

APPROPRIATIONS, EXPENDITURES AND BALANCE FOR YEAR 1915

	Total Appropriations Including Transfers, Credits, Etc.	Total Incumbrance	Unincumbered Balance.
Personal Service	$501,694.75	$488,429.55	$ 13,265.20
Supplies	35,475.00	34,053.48	1,421.52
Material	8,669.50	5,081.64	3,587.86
Equipment	69,226.50	47,920.51	21,305.99
Construction and Extension	50,500.00	28.00	50,472.00
Repairs	23,554.94	22,085.10	1,469.84
Light, Heat and Power	100.00	52.00	48.00
Janitorial Service	1,140.00	975.00	165.00
Transportation and Communication	6,270.00	5,628.96	641.04
Contingencies	3,852.34	1,042.53	2,809.81
Fixed Charges:			
Rent	280.00	588.00	868.00
Advertising	25.00	.....	25.00
Contributions	1,680.00	1,230.00	450.00
Real Estate	4,500.00	.....	4,500.00
Rent Fire Hydrants, St. Johns	1,200.00	806.76	393.24
	$708,168.03	$606,745.53	$101,422.50
Fire Marshal's Traveling Expense	100.00	100.00	.....
Miscellaneous	14.59	14.59	.....
	$708,282.62	$606,860.12	$101,422.50

DISTRIBUTION OF EXPENSES.

ENGINE COMPANIES, FIRE BOATS AND MISCELLANEOUS	Personal Service	Office Supplies	Fuel Oil	Heating Fuel	Forage Supplies	Veterinary Supplies	Cleaning Supplies
David Campbell	$ 26,176 85	.42	4,473.97				59.79
Geo. H. Williams	21,241.95	.88	1,800.19	81.45			120.34
Eng. Co. 1	13,574.95	.46		289.59			32.80
" " 2	13,740.60	.55		198.38	671.80		57.56
" " 3	14,782.95	.46		155.08	675.67		42.18
" " 4	11,269.45	.42		215.75	664.43		23.16
" " 5	11,835.55	.94		230.67	570.31	1.00	47.80
" " 6	10,150.25	.42		211.55	643.94		36.86
" " 7	12.140.25	.04		212.00	676.82		29.06
" " 8	12,188.85	.20		331.05	684.47	1.00	35.32
" " 9	11,534.65	.46		188.50	47.23		41.25
" " 10	10,895.10	.42		251.60	704.10		44.26
" " 11	12,006.45	.42		199.00	539.17		33.84
" " 12	11,826.85	.46		164.43	527.84		34.32
" " 13	12,759.40	.42		126.50			33.76
" " 14	12,086.10	.58		273.13	516.07		24.17
" " 15	9,515.25	.88		116.25			19.56
" " 16	12,283.10	.84		165.00	535.16		29.58
" " 17	10,654.95	.04		258.57			44.85
" " 18	8,253.30	.46		206.93			27.43
" " 19	10,320.55	.84		293.65	723.31		50.53
" " 20	10,695.45	.46		298.00	699.91	3.00	42.22
" " 21	8,216.20	.46					28.21
" " 22	10,038.85	.42		122.55			32.42
" " 23	9,867.70	1.42		169.46			34.73
" " 24	11,574.70	.42		340.00	703.67		40.33
" " 25	8,176.15	.42		187.50	497.81		29.33
" " 26	8,477.40	.42		120.25	364.03		23.62
" " 27	8,094.98	.50		265.60	355.40		26.97
" " 28	8,275.50	.46		345.89	282.06		15.98
" " 29	8,586.85	.46		254.36	242.91		18.37
" " 30	8,491.30	.42		256.14	288.90		36.99
" " 31	8.399.10			102.25	329.58		29.53
" " 32	3,154.85	.46					16.14
" " 33	4,755.40	.42		47.65	248.21		12.15
Truck 1	13,212.05	.42			177.74		27.31
Truck 2	11,304.20	.12		50.11	244.39		23.02
Truck 3	12,777.00	.46		187.12	380.55		36.56
Truck 4	1,1168.00	.46		6.00	349.29		25.24
Truck 5	10,299.65	.42			444.08		23.25
Chemical 1	3,897.10						5.22
Supply House				213.00			
Reserve Engine							
Gray's Crossing Vol. Hose Co							
Lents Vol. Hose Co							
Office and Staff	19,207.54	614.69					
Fire Alarm Tel.	16,055.38	27.18					5.80
Fire Marshal's Office	4,658.08	78.24					
Hydrants and Cisterns							
Hose							
Chief Dowell's Auto							.40
Chief Laudenklos' auto							
Chief Stevens' auto							
Chief Holden's auto							
Chief Young's auto							
Fire Alarm T							
Fire Alarm Truck							
Supply Truck							
Auto recharging outfit							
Store Account							
Rental Hydrants, St. Johns							
Fire Marshal, travel. exp							
Credits	191.23	2.82		16.20	7.50		1.73
Totals	$ 488,429.55	736.52	6,274.16	7,118.76	13,781.35	5.00	1,400.48

DISTRIBUTION OF EXPENSES — Continued.

ENGINE COMPANIES FIRE BOATS AND MISCELLANEOUS	Auto Supplies	Agricult. Supplies	Gen. Plant Supplies	Building Material	Coal Oil	Gen. Plant Material	Office Equip.	Household Equip.
David Campbell	6.51		214.66	88.35	17.00	244.51		35.10
Geo. H. Williams	17.38		173.07	252.79	19.55	73.88		613.95
Engine Co. No. 1	35.61		41.59	15.33	20.40			
" " No. 2			25.63	2.76	10.20	.05		
" " No. 3			25.60	95.29	17.85			4.26
" " No. 4			21.20	2.76	11.05			
" " No. 5			27.75	24.61	10.20	10.34		
" " No. 6			19.86	86.48	12.75			
" " No. 7			20.23	791.07	10.20	2.25		11.76
" " No. 8			23.52	18.28	9.35	.02		
" " No. 9	76.94		41.99	2.76	10.20			
" " No. 10			25.92	33.10	10.20			58.50
" " No. 11			19.80	.64	10.20			4.00
" No. 12			19.32	3.49	11.05	1.08		
" " No. 13	397.00	1.32	19.72	9.46	7.65			
" " No. 14			22.16	17.42	10.20	1.04		
" " No. 15	16.61		12.58	10.64	3.40	6.15		
" " No. 16			19.83	23.88	9.35			
" " No. 17	69.98		12.28	2.46	10.20			
" " No. 18	60.02	5.00	24.33	93.91	9.35	15.35		
" " No. 19		.73	41.71	34.78	10.20	1.04		1.37
" " No. 20			29.59	35.50	9.35	2.66		32.52
" " No. 21	230.82		24.70	2.16	1.70			.75
" " No. 22	23.94		48.35	13.78	5.95			7.35
" " No. 23	18.00		41.84	48.18	7.65			
" " No. 24		2.25	48.94	137.27	10.20			
" " No. 25		3.50	37.88	14.76	9.35	.22		
" " No. 26	18.27		26.03	12.39	7.65			9.50
" " No. 27			20.17	13.82	8.50			
" " No. 28			39.62	.60	6.80			3.00
" " No. 29			7.14	13.78	5.10			
" " No. 30		.70	7.74	2.85	7.65			
" " No. 31			20.86	26.17	10.20			
" " No. 32	3.06		6.26	5.06	3.40			83.45
" " No. 33			25.65	165.40	5.95			81.68
Truck 1	17.46		38.70	.63	9.35	.25		
Truck 2			23.88		10.20			
Truck 3	93		28.55		7.65			
Truck 4	21.58		34.55	5.32	8.50	10.00		23.52
Truck 5			15.57		9.35			
Chemical 1	6.22		38.66					
Supply House								
Reserve Engine			.12			1.08		
Gray's Cross'g. Vol. Hose								
Lents Vol. Hose Co								
Office and Staff				20.12			42.35	
Fire Alarm Tel			193.70			2,479.00		
Fire Marshal's Office	80.62		15.06	2.29			35.20	
Hydrants and cisterns			3.84			102.30		
Hose								
Chief Dowell's auto	157.62							
Chief Laudenklos' auto	160.14							
Chief Stevens' auto	377.55							
Chief Holden's auto	283.93		1.67					
Chief Young's auto	124.15							
Fire Alarm T	132.01							
Fire Alarm Truck	183.33					12.48		
Supply Truck	195.52							
Auto recharging outfit								
Store account	1,275.51							
Rental Hydrants. St. John								
Fire Marshal, trav. exp								
Credits	1280.27		3.60	12.40			20.00	
Totals	2,710.44	13.50	1,628.22	2,117.94	385.05	2,963.70	57.55	970.71

DISTRIBUTION OF EXPENSES — Continued.

ENGINE COMPANIES FIRE BOATS AND MISCELLANEOUS	Motorless Vehicles and Equipment	Auto Accessories	Motor Vehicles	Tools	Hose	General Plant Equipment	Construction and Extension	House Repairs
David Campbell				7.40		392.09		142.96
Geo. H. Williams		217.91		58.65		162.31	28.00	296.95
Engine Co. No. 1		4.00				10.96		80.63
" " No. 2				6.33		25.42		11.80
" " No. 3				2.38		5.56		52.37
" " No. 4	1.00			.63		3.28		112.61
" " No. 5	2.00					13.38		438.17
" " No. 6				.79		1.50		272 34
" " No 7	1.00			1.63		117.68		346.55
" " No. 8						17.51		229.25
" " No. 9				.63		8.17		116.33
" " No. 10	2.00			2.99		7.03		41.74
" " No. 11	1.00					13.82		83.97
" " No. 12				.40		5.18		84.55
" " No. 13				2.92		13.65		22.18
" " No. 14	3.00			1.64		20.09		24.16
" " No. 15		4.00				.99		141.13
" " No. 16	2.00			1.75		10 24		70.18
" " No. 17						6.51		57.57
" " No. 18				5.17		9.67		41.98
" " No. 19				2.62		30.65		376.35
" " No. 20						35.92		40.68
" " No. 21						2.50		9.86
" " No. 22						2.22		23.95
" " No. 23				2.54		7.36		98.02
" " No. 24				3.88		42.31		74.80
" " No. 25				1.60		8.02		97.19
" " No. 26						6.25		28.14
" " No. 27				2.94		9.00		46.80
" " No. 28	4.41					7.14		72.38
" " No 29				.42		10.77		85.46
" " No. 30						13.67		201.03
" " No. 31	5.95					13.11		
" " No. 32	4.05	3.46		4.87		94.96		1.50
" " No. 33				1.07		28.06		44.10
Truck 1						15.64		11.29
Truck 2						1.00		53.34
Truck 3				1.37		7.36		67.99
Truck 4						7.00		3.09
Truck 5						1.82		3.29
Chemical 1								
Supply House								74.45
Reserve Engine								
Gray's Cross. Vol. Hose Co								
Lents Vol. Hose Co						16.00		
Office and Staff			31668 00			16.80		21.10
Fire Alarm Tel				67.45		32.07		
Fire Marshal's Office						2.70		
Hydrants and cisterns								
Hose					13338 00			
Chief Dowell's auto		36.68						
Chief Laudenklos' auto		14.70						
Chief Stevens' auto		100.00						
Chief Holden's auto		6.86						
Chief Young's auto		3.54						
Fire Alarm T								
Fire Alarm Truck								
Supply Truck		14.60						
Auto recharging outfit		14.65						
Store account								
Rental Hydrants, St. Johns								
Fire Marshal. trav. exp								
Credits								
Totals	26.41	420.40	31668.00	182.07	13338.00	1,257.37	28.00	4,102.23

DISTRIBUTION OF EXPENSES — Continued.

ENGINE COMPANIES FIRE BOATS AND MISCELLANEOUS	Apparatus Repairs	Harness Repairs	Hose Repairs	Dock Repairs	Hydrant and Cistern Repairs	F. A. T. Repairs	Auto Repairs	Light, Heat and Power
David Campbell	1,531.25			217.43			9.63	
Geo. H. Williams	102.08							
Engine Co. No. 1	16.88						241.57	
" " No. 2	194.36	8.15						
" " No. 3	143.51	7.38						
" " No. 4	312.72	10.87						
" " No. 5	414.70	8.60						
" " No. 6	90.55	4.40						
" " No. 7	179.38	7.26						
" " No. 8	301.16	7.75						
" " No. 9	36.04						153.57	
" " No. 10	155.35							
" " No. 11	141.63	1.80						
" " No. 12	93.45	4.53						
" " No. 13	20.09						232.82	
" " No. 14	217.96	3.45						
" " No. 15	2.96						28.75	
" " No. 16	155.58	9.56						
" " No. 17	38.47						189.23	
" " No. 18	24.01						6.00	
" " No. 19	208.23	22.70						
" " No. 20	18.96	1.40						
" " No. 21	6.87						11.08	
" " No. 22	13.83	.35					41.82	
" " No. 23	5.67						15.16	
" " No. 24	201.34	12.01						
" " No. 25	15.11	6.40						
" " No. 26	12.00						117.78	
" " No. 27	172.94							
" " No. 28	10.04	3.25						
" " No. 29	.09							
" " No. 30	21.94							
" " No. 31	7.54	2.90						
" " No. 32	4.43	.50					23.57	
" " No. 33	44.97	.75						
Truck 1							41.85	
Truck 2	1.46	4.20						
Truck 3	955.97	5.75					371.80	
Truck 4	23.93	1.25					18.13	
Truck 5	128.14	.90						
Chemical 1							4.18	
Supply House								
Reserve Engine	120.96							
Gray's Cross. Vol. Hose Co	6.76							
Lents Vol. Hose Co								
Office and Staff								
Fire Alarm Tel						654.66		52.00
Fire Marshal's Office							68.67	
Hydrants and cisterns					4,376.51			
Hose			756.00					
Chief Dowell's auto							773.43	
Chief Laudenklos' auto							525.75	
Chief Stevens' auto							1,146.38	
Chief Holden's auto							646.19	
Chief Young's auto							75.83	
Fire Alarm T							449.36	
Fire Alarm Truck							332.06	
Supply Truck							97.29	
Auto recharging outfit							33.57	
Store account								
Rental Hydrants.St.Johns								
Fire Marshal, trav. exp.								
Credits					17.45			
Totals	6,153.31	136.11	756.00	217.43	4,359.06	654.66	5,655.47	52.00

DISTRIBUTION OF EXPENSES — Continued.

ENGINE COMPANIES FIRE BOATS AND MISCELLANEOUS	Janitorial Service	Horse Shoeing	Veterinary Service	Boarding Horses	Carfare	Miscel. Hauling	Tel. and Tel. Service	Contingencies
David Campbell								
Geo. H. Williams								
Engine Co. No. 1								
" " No. 2	36.81	208.38	28.26					
" " No. 3	34.50	294.33	25.92					
" " No. 4	34.50	209.13	25.92					
" " No. 5	34.50	189.90	25.92					
" " No. 6	34.50	175.86	25.92					
" " No. 7	34.50	218.05	25.92					
" " No. 8	34.50	220.57	25.92					
" " No. 9	22.89	12.99	12.36					
" " No. 10	34.50	175.80	25.92					
" " No. 11	34.50	124.11	25.92					
" " No. 12	34.50	144.72	25.92					
" " No. 13								
" " No. 14	34.50	153.99	25.92					
" " No. 15								
" " No. 16	34.50	170.56	25.92					
" " No. 17								
" " No. 18								
" " No. 19	34.50	209.61	25.92					
" " No. 20	34.50	208.24	25.92					
" " No. 21								
" " No. 22								
" " No. 23								
" " No. 24	34.50	183.76	25.92					
" " No. 25	34.50	81.66	25.92					
" " No. 26	34.50	12.60	25.92					
" " No. 27	34.50	59.14	25.92					
" " No. 28	34.50	95.18	25.92					
" " No. 29	34.50	69.37	25.92					
" " No. 30	34.50	76.28	25.92					
" " No. 31	34.50	40.40	25.92					
" " No. 32								
" " No. 33	34.50	93.43	25.92					
Truck 1	22.89	4.46	12.36					
Truck 2	34.50	90.61	25.92					
Truck 3	34.50	129.63	25.92					
Truck 4	29.91	93.72	19.02					
Truck 5	34.50	107.53	25.92					
Chemical 1								
Supply House								
Reserve Engine								
Gray's Cross. Vol. Hose Co								
Lents Vol. Hose Co								
Office and Staff				80.25		880.60		168.95
Fire Alarm Tel								
Fire Marshal's Office					2.00		91.60	67.10
Hydrants and cisterns								
Hose								
Chief Dowell's auto								
Chief Laudenklos' auto								
Chief Stevens' auto								
Chief Holden's auto								
Chief Young's auto								
Fire Alarm Tel								
Fire Alarm Truck								
Supply Truck								
Auto recharging outfit								
Store account								
Rental Hydrants, St. Johns								
Fire Marshal, trav. exp								
Credits								14.44
Totals	975.00	3,854.51	720.00	80.25	2.00	880.60	91.60	218.61

DISTRIBUTION OF EXPENSES — Continued.

ENGINE COMPANIES, FIRE BOATS AND MISCELLANEOUS	Street Assessm'ts	Repairs to Property Damaged by Equip.	Rent	Allowances to Volunteer Hose Cos.	Rental Hydrants at St. Johns	Miscellaneous	Totals
David Campbell		352.34					33,970.26
Geo. H. Williams			132.00			2.50	25,395.83
Engine Co. No. 1							14,364.77
" " No. 2							15,227.04
" " No. 3							16,365.29
" " No. 4							12,918.88
" " No. 5							13,886.34
" " No. 6			180.00				11,947.97
" " No. 7							14,825.65
" " No. 8							14,128.72
" " No. 9							12,306.96
" " No. 10							12,468.53
" " No. 11							13,240.27
" " No. 12							12,982.09
" " No. 13							13,646.89
" " No. 14							13,435.58
" " No. 15							9,879.15
" " No. 16							13,547.03
" " No. 17							11,345.11
" " No. 18						1.00	8,783.91
" " No. 19							12,389.29
" " No. 20							12,214.28
" " No. 21							8,535.31
" " No. 22							10,375.78
" " No. 23							10,317.73
" " No. 24							13,436.30
" " No. 25							9,227.32
" " No. 26							9,296.75
" " No. 27							9,137.68
" " No. 28							9,222.73
" " No. 29							9,355.50
" " No. 30							9,456.03
" " No. 31							9,048.01
" " No. 32							3,410.02
" " No. 33							5,615.31
Truck 1							13,592.40
Truck 2							11,866.95
Truck 3							15,019.11
Truck 4							11,848.51
Truck 5							11,094.42
Chemical 1							3,951.38
Supply House							287.45
Reserve Engine							122.16
Gray's Crossing Vol. Hose Co.							6.76
Lents Vol. Hose Co							16.00
Office and Staff	357.73	113.85		1,230.00		15.19	54,437.17
Fire Alarm Tel							19,567.24
Fire Marshal's Office							5,101.56
Hydrants and cisterns						46.73	4,529.38
Hose							14,094.00
Chief Dowell's auto							968.13
Chief Laudenklos' auto							700.59
Chief Stevens' auto							1,623.93
Chief Holden's auto							931.79
Chief Young's auto							206.84
Fire Alarm Tel							584.91
Fire Alarm Truck							515.39
Supply Truck							319.89
Auto recharging outfit							48.22
Store account							1,275.51
Rental Hydrants, St. Johns					985.74		985.74
Fire Marshal, trav. exp						100.00	100.00
Credits			900.00		178.98		2,649.62
Totals	357.73	466.19	*588.00	1,230.00	806.76	165.42	606,860.12

*Credits

AUTOMOBILES AND AUTO APPARATUS IN THE BUREAU OF FIRE

MAKE	Description.	Number.	Date of Purchase.	Price.
Pierce-Arrow	6-Cylinder 4 Passenger Roadster	30038	Feb., 1909	$3,500.00
Cadillac	4-Cylinder 5-Passenger Touring Car	2916	May, 1911	2,000.00
Overland	4-Cylinder 4-Passenger Touring Car	611889	July, 1912	2,119.00
Mitchell	6-Cylinder 2-Passenger Roadster	23445	April, 1912	2,065.00
Pope-Hartford	4-Cylinder 2-Passenger Roadster	2591	August, 1912	3,000.00
Velie	Runabout	30208	July, 1913	1,575.00
White	3-Ton Truck	20786	October, 1914	4,600.00
Federal	1-Ton Truck	921	April, 1913	1,965.00
American-LaFrance	Combination Hose and Chemical Engine	13	June, 1911	5,380.00
American-LaFrance	Combination Hose and Chemical Engine	14	June, 1911	5,380.00
American-LaFrance	Type 10 Combination Hose and Chemical Engine	269	June, 1913	
American-LaFrance	Type 10 Combination Hose and Chemical Engine	261	June, 1913	
American-LaFrance	Type 10 Combination Hose and Chemical Engine	265	June, 1913	
American-LaFrance	Type 10 Combination Hose and Chemical Engine	267	June, 1913	
American-LaFrance	Type 10 Combination Hose and Chemical Engine	264	June, 1913	52,264.00
American-LaFrance	Type 10 Combination Hose and Chemical Engine	268	June, 1913	
American-LaFrance	Type 12 Pumper	271	June, 1913	
American-LaFrance	85-Foot Aerial Truck	270	June, 1913	
Pope-Hartford	Type M Combination Hose and Chemical Engine	100	April, 1913	6,000.00
Pope-Hartford	Type M Combination Hose and Chemical Engine	101	April, 1913	6,000.00
Velie	2-Ton Truck	2084	Dec., 1913	3,000.00
American-LaFrance	Type 12 Pumper	409	Nov. 21, 1913	9,000.00
White	Ton and One-Half Chassis	20529	Feb., 1915	3,000.00
Christie	Tractor		March, 1914	5,656.00
White	Auto Chemical Engine	23990GTF	June, 1915	5,900.00
Seagrave	6-Cylinder Motor City Service Truck and Ladder Truck		August, 1915	6,468.00
Selden	Combination Hose and Chemical	23290	May, 1914	2,860.00

BUREAU OF FIRE AUTO APPARATUS
Expense Distribution for 1915

NAME	Gasoline	Grease	Oil	Distillate	Soap	Supplies	Tires	Accessories	Repairs	Total	Mileage
Chief B. F. Dowell's Auto	$ 68.34	$ 4.50	$ 5.80	$ 2.87	$ .12	$ .40	$ 75.99	$ 36.68	$ 773.43	$ 963.13	6110 (1 mo.)
Asst. Chief M. Laudenklos	51.78	3.38	2.85	1.61	.17	6.94	93.41	14.70	525.75	700.59	4479 (2 mo.)
Second Asst. Chief J. W. Stevens	129.95	4.87	35.88			13.67	193.18	100.00	1146.38	1623.93	7536 (5 mo.)
Battalion Chief L. G. Holden	99.82	6.38	26.01	1.61	.06	9.52	142.20		646.19	931.79	5987
Battalion Chief John Young	33.95	1.20	8.66			6.60	73.74	6.86	75.83	206.84	3400 (12 mo.)
Fire Alarm Telegraph	45.76	1.87	8.65	.98		4.32	70.43	3.54	449.36	584.91	3090 (6 mo.)
Fire Alarm Telegraph Truck	94.98	9.30	14.85		.29	3.89	60.02		332.06	515.39	4570 (12 mo.)
Supply Truck	158.94	13.50	21.43			14.13		14.60	97.29	319.89	7840
Auto Recharging Outfit								14.65	33.57	48.22	
Fire Marshal's Inspecting Autos	54.57		3.84			2.07	20.14		68.67	149.29	8370
Fire Boat, "David Campbell"	5.04					1.47			9.63	16.14	110
Fire Boat, "Geo. H. Williams"	15.12		1.90			.36		217.91		235.29	632
Engine Co. 1 Tractor	19.41		5.71			2.80			37.88	65.80	163
" " No. 1 Combination	9.13		4.85			2.22		4.00	203.69	223.89	144
" " No. 9	22.68	3.00	6.56			44.70			153.57	230.51	482
" " No. 13 Combination	9.08	4.50	7.05		.17	53.10	282.87		119.80	476.57	279
" " No. 13 Pumper	22.66	5.25	11.62		.16	.54			113.02	153.25	314
" " No. 15	10.85		3.90					4.00	28.75	49.36	282
" " No. 17 Combination	13.78	.75	8.94		.23				134.12	157.82	343
" " No. 17 Pumper	30.94	1.50	11.55						55.11	99.10	334
" " No. 18	7.49		3.90			1.33	47.30		6.00	66.02	181
" " No. 21	14.59	1.35	1.91			4.08	230.82		11.08	263.83	179
" " No. 22	13.63	3.00	5.80			1.51			41.82	65.76	265
" " No. 23	10.12	1.28	5.90			.70			15.16	33.16	209
" " No. 26	9.08	6.75	1.90			.54			117.78	136.05	273
" " No. 32	1.40					1.66			23.57	26.63	
Truck 1	11.93	1.28	4.00		.25				41.85	59.31	139
Truck 3	.93								371.80	372.73	
Truck 4	13.01	.75	1.90		.29	5.63			18.13	39.71	303in serv. Aug.
Chemical 1	6.22								4.18	10.40	69in serv. Jul.
	$ 985.18	$ 74.41	$ 215.36	$ 7.07	$ 1.74	$ 184.04	$1290.10	$ 416.94	$5655.47	$8830.31	

*Number of months mileage estimated.

HOSE ON HAND

COMPANY	3½-inch. Feet.	2¾-inch. Feet.	2½-inch. Feet.	1½-inch. Feet.	1-inch Chemical Feet.	¾-inch Chemical Feet.
Fireboat "David Campbell" ...	1,900	3,700	.....	300	300	.....
Fireboat "Geo. H. Williams".	1,800	2,250	.....	400	.....	.....
Engine Co. 1..	.....	.....	2,000	300	250	.....
Engine Co. 2..	.....	.....	1,700	300	.....	.....
Engine Co. 3..	.....	1,950	.....	300	.....	.....
Engine Co. 4..	.....	.....	1,970	300	.....	.....
Engine Co. 5..	.....	.....	2,000	250	.....	.....
Engine Co. 6..	.....	.....	2,000	200	.....	.....
Engine Co. 7..	.....	.....	2,000	300	.....	.....
Engine Co. 8..	.....	.....	1,850	300	.....	.....
Engine Co. 9..	.....	.....	1,850	200	.....	250
Engine Co. 10..	.....	.....	2,000	300	.....	.....
Engine Co. 11..	.....	.....	2,000	300	.....	.....
Engine Co. 12..	.....	.....	2,000	300	.....	.....
Engine Co. 13..	.....	.....	1,650	300	.....	200
Engine Co. 14..	.....	.....	1,900	200	200	.....
Engine Co. 15..	.....	.....	1,900	300	.....	250
Engine Co. 16..	.....	.....	2,000	200	.....	.....
Engine Co. 17..	.....	.....	1,950	300	.....	250
Engine Co. 18..	.....	.....	2,000	200	.....	250
Engine Co. 19..	.....	.....	1,850	.....	150	.....
Engine Co. 20..	.....	.....	1,618	300	.....	.....
Engine Co. 21..	.....	.....	1,825	.....	.....	250
Engine Co. 22..	.....	.....	1,900	250	.....	250
Engine Co. 23..	.....	.....	1,700	300	.....	250
Engine Co. 24..	.....	.....	1,550	200	200	.....
Engine Co. 25..	.....	.....	1,900	300	.....	.....
Engine Co. 26..	.....	.....	1,985	300	.....	250
Engine Co. 27..	.....	.....	2,000	200	.....	230
Engine Co. 28..	.....	.....	2,000	200	.....	250
Engine Co. 29..	.....	.....	2,000	300	.....	.....
Engine Co. 30..	.....	.....	2,000	300	.....	.....
Engine Co. 31..	.....	.....	2,000	450	.....	.....
Engine Co. 32..	.....	.....	3,100	150	.....	200
Engine Co. 33..	.....	.....	2,000	200	.....	.....
Truck Co. 1....	.....	.....	.....	.....	.....	.....
Truck Co. 2....	.....	.....	.....	.....	.....	.....
Truck Co. 3....	.....	.....	.....	.....	.....	250
Truck Co. 4....	.....	.....	.....	.....	250	.....
Truck Co. 5....	.....	.....	.....	.....	.....	.....
Chemical 1.....	.....	.....	.....	.....	400	.....
Totals.....	3,700	7,900	62,198	9,000	1,750	3,130

AUXILIARY VOLUNTEER HOSE COMPANY

	2½-inch. Feet.	1½-inch. Feet.	1-inch Chemical. Feet.
Linnton Volunteer Hose Co.....	1,250	1,300	100
Woodstock Volunteer Hose Co.....	600	.....	.....
Tremont Volunteer Hose Co.....	800	.....	.....
Arbor Lodge Volunteer Hose Co....	1,000	.....	.....
Midway Volunteer Hose Co.....	1,000	.....	.....
Portsmouth Volunteer Hose Co.....	1,000	.....	.....
Lents Volunteer Hose Co.....	600	.....	.....
Grays Crossing Volunter Hose Co...	600	.....	.....
Totals.....	6,850	1,300	100

EQUIPMENT

	Pieces.		Pieces.
Fire Boats	2	Hydrants	4,945
Auto Apparatus	27	Cisterns	81
Horse-Drawn Apparatus	42	Alarm Boxes	332
Horse-Drawn Apparatus in Reserve	6	Eight Auxiliary Fire Companies with 7 reels, 2 village trucks, 1 40-gallon chemical and 8,250 feet of hose.	
Horses	100		
Hose, feet	92,678		

VALUATION OF REAL ESTATE, IMPROVEMENTS AND APPARATUS AT VARIOUS FIRE STATIONS

	Real Estate.	Improvements.	Apparatus.
Fire Boat "David Campbell"	$ 12,000.00	$ 12,000.00	$128,000.00
Fire Boat "Geo. H. Williams"	Lease	500.00	78,917.91
Engine Co. 1 and Truck 1	87,000.00	8,000.00	28,675.00
Engine Co. 2	15,000.00	14,000.00	7,700.00
Engine Co. 3	26,000.00	2,800.00	5,900.00
Engine Co. 4 and Truck 2	6,150.00	15,000.00	6,100.00
Engine Co. 5	1,600.00	2,500.00	5,150.00
Engine Co. 6	Lease	1,500.00	5,400.00
Engine Co. 7 and Truck 4	6,000.00	8,000.00	11,868.00
Engine Co. 8 and Truck 5	4,400.00	15,000.00	5,650.00
Engine Co. 9	2,600.00	15,000.00	4,500.00
Engine Co. 10	600.00	3,000.00	4,850.00
Engine Co. 11	700.00	3,000.00	5,150.00
Engine Co. 12	1,400.00	3,000.00	5,150.00
Engine Co. 13	3,500.00	7,200.00	13,000.00
Engine Co. 14	1,700.00	1,000.00	5,250.00
Engine Co. 15	2,200.00	7,000.00	5,800.00
Engine Co. 16	8,500.00	15,000.00	5,150.00
Engine Co. 17	5,200.00	12,000.00	14,000.00
Engine Co. 18	3,000.00	7,000.00	5,800.00
Engine Co. 19	1,700.00	9,000.00	5,250.00
Engine Co. 20	3,100.00	1,000.00	5,150.00
Engine Co. 21 and Chemical 1	13,100.00	16,000.00	11,700.00
Engine Co. 22	10,500.00	15,000.00	5,800.00
Engine Co. 23	950.00	7,000.00	5,800.00
Engine Co. 24	7,000.00	15,000.00	5,250.00
Engine Co. 25	1,200.00	16,000.00	900.00
Engine Co. 26	4,200.00	2,400.00	5,800.00
Engine Co. 27	650.00	8,400.00	1,000.00
Engine Co. 28	1,600.00	8,000.00	1,000.00
Engine Co. 29	Lease	8,000.00	900.00
Engine Co. 30	900.00	8,000.00	900.00
Engine Co. 31	800.00	2,880.00	900.00
Engine Co. 32	8,000.00	20,000.00	3,000.00
Engine Co. 33	2,400.00	800.00	600.00
Truck Co. 3	10,500.00	12,500.00	3,000.00
Supply House	2,500.00	1,800.00	3,700.00
Fire Alarm Truck	.....	.....	1,200.00
In Reserve	.....	.....	9,200.00
Officers' Automobiles	.....	.....	6,900.00
Totals	$256,650.00	$304,280.00	$429,960.91

LOCATIONS OF HOUSES OCCUPIED AS FIRE STATIONS

Fire Boat No. 1, "David Campbell"	Foot of East Washington Street
Fire Boat No. 2, "Geo. H. Williams"	Foot of Hoyt Street
Engine Co. No. 1	168-170 Fourth Street
Engine Co. No. 2	126 North Third Street
Engine Co. No. 3	510 Washington Street
Engine Co. No. 4	370 Fourth Street
Engine Co. No. 5	811 Front Street
Engine Co. No. 6	Twenty-second and Nicolai Streets
Engine Co. No. 7	40 East Third Street
Engine Co. No. 8	303 Russell Street
Engine Co. No. 9	162 East Thirty-fifth Street
Engine Co. No. 10	1250 Macadam Street
Engine Co. No. 11	545 Powell Street
Engine Co. No. 12	63 East Twenty-eighth Street North
Engine Co. No. 13	261 Grand Avenue North
Engine Co. No. 14	1027 Union Avenue North
Engine Co. No. 15	590 Spring Street
Engine Co. No. 16	494 Montgomery Street
Engine Co. No. 17	188 North Twenty-fourth Street
Engine Co. No. 18	448 East Twenty-fourth Street North
Engine Co. No. 19	1597 East Stark Street
Engine Co. No. 20	1660 East Thirteenth Street
Engine Co. No. 21	69 Second Street
Engine Co. No. 22	273 First Street
Engine Co. No. 23	367 East Seventh Street
Engine Co. No. 24	1126 Patton Avenue
Engine Co. No. 25	1000 Francis Avenue
Engine Co. No. 26	329 North Twentieth Street
Engine Co. No. 27	30 East Eighty-second Street North
Engine Co. No. 28	1494 Sandy Boulevard
Engine Co. No. 29	426 Durham Avenue
Engine Co. No. 30	1711 Brandon Street
Engine Co. No. 31	4536 Sixty-seventh Street Southeast
Engine Co. No. 32	St. Johns
Engine Co. No. 33	859 Mississippi Avenue
Truck 1	168-170 Fourth Street
Truck 2	370 Fourth Street
Truck 3	511 Glisan Street
Truck 4	40 East Third Street
Truck 5	303 Russell Street
Chemical 1	69 Second Street
Supply House	227 Union Avenue North

LOCATIONS OF VOLUNTEER HOSE COMPANIES

Portsmouth	Stanford, between Portsmouth and Boudoin Streets
Midway	1189 Milwaukie Street
Lents	Fifty-eighth Ave. and Ninety-third St., Odd Fellows Bldg.
Tremont	Fifty-ninth and Seventy-second Street
Linnton	First and D Streets
Woodstock	4228 Sixtieth Avenue, S. W. Corner Forty-third Avenue
Arbor Lodge	287 West Portland Blvd., N. W. Corner Greely and Blvd.

Portland, Oregon, July 8, 1916.

Mr. B. F. Dowell, Chief Engineer, Bureau of Fire, Portland, Oregon.

Dear Sir: The following report is a summary of the maintenance, installation of new equipment and operation of the Fire Alarm Telegraph for the year ending November 30, 1915.

During the year the equipment operated perfectly with the exception of a few minor cases of line trouble due to crosses with electric light wires and the blowing out of fuses. The overhead lines stood up very satisfactory. Considerable work was done on these lines, which now are extending over a very large area of the City to keep them clear from contact with other foreign wires, as the multiplicity of wires now overhead is increasing wonderfully.

A sub-station containing storage battery and the necessary equipment for charging same has been installed at Engine 8 house, Russell Street between Williams Avenue and Rodney Avenue. This battery furnishes current for operating the circuits north of Sullivan's Gulch, independent of the supply at the City Hall, and would show its usefulness in case the river cables connecting the East Side with the West Side were put out of service.

The amount of overhead wire being put up is increasing so that attention should be given to attempting to put such of our wires as we are able to do so underground. The remarkable success we have had with our present underground installation leads me to the conclusion that the placing of more of our wires underground, particularly the trunk lines to different sections of the City from the City Hall, should be taken up for consideration.

The fifty fire alarm boxes of the older type, for which provision has been made for new parts to modernize same, have been remodeled and are in every respect as good as any of the latest types purchased.

This list of new boxes were installed at the following locations:

Box 144—Northeast Corner Twenty-first and Quimby Streets.
Box 155—Southwest Corner Twentieth and Northrup Street.
Box 163—Northwest Corner Tenth and Montgomery Streets.
Box 177—Southwest Corner Twenty-first and York Streets.
Box 188—Southwest Corner Twenty-fifth and Wilson Streets.
Box 285—Southeast Corner Seventh and East Ash Streets.
Box 295—Ladd Avenue and Central Park.
Box 367—Southeast Corner Seventeenth and Wasco Streets.
Box 368—Northwest corner Eighth and Hancock Streets.
Box 378—Southwest Corner Fourteenth and Brazee Streets.
Box 391—Northwest Corner Beech Street and Mallory Avenue.
Box 392—Northeast Corner Union Avenue and Constance Street.
Box 393—Southeast Corner Union Avenue and Alberta Street.
Box 394—Southwest corner Albina Avenue and Alberta Street.
Box 395—Northeast Corner Kerby and Emerson Streets.
Box 396—Southeast Corner Vancouver Avenue and Going Street.
Box 414—Northwest Corner Thirty-seventh and Division Streets.
Box 429—Southeast Corner Fifty-second and Hassallo Streets.
Box 437—Southeast Corner Eighty-fifth and East Pine Streets.
Box 442—Southeast Corner Sixtieth and East Glisan Streets.
Box 443—Northeast Corner Seventy-seventh and East Market Streets.
Box 445—Thirty-ninth and East Glisan Streets.
Box 446—Northeast Corner Twentieth Street and Sandy Road.
Box 447—Southwest Corner Sixtieth and East Ash Streets.
Box 448—Southwest Corner Seventy-sixth and East Ash Streets.
Box 449—Northwest Corner Fiftieth and Division Streets.
Box 473—Northeast Corner Eighteenth and Main Streets.
Box 474—Northwest Corner Fifty-seventh and Thompson Streets.
Box 475—Southwest Corner Thirty-eighth and Lincoln Streets.
Box 476—Southeast Corner Thirty-fourth and Harrison Streets.
Box 478—Southwest corner Fourteenth Street and Henry Avenue.
Box 479—Southeast Corner Milwaukie and Bybee.
Box 483—Northeast Corner Fifty-fifth Street and Hawthorne Avenue.
Box 486—Southeast Corner Fifteenth and Umatilla Streets.
Box 487—Southeast Corner Union and Spokane Avenues.
Box 489—Southwest Corner Ninth Street and Spokane Avenue.
Box 491—Northeast Corner Milwaukie and Insley Avenues.
Box 512—Northeast Corner Twenty-first and Schuyler Streets.
Box 514—Southwest Corner Seventeenth and Tillamook Streets.

Respectfully submitted,

CHAS. A. SAVARIAU,

Superintendent Fire Alarm and Police Telegraph.

BUREAU OF POLICE

Portland, Oregon, January 1, 1916.

Hon. H. R. Albee, Mayor, and Commissioner of Public Safety, Portland, Oregon.

Dear Sir: I have the honor to submit herewith my Third Annual Report of the Bureau of Police of the Department of Public Safety for the fiscal year ending November 30, 1915.

Statistical reports showing the various activities of the Bureau, including special reports from the Detective Division, under command of Captain C. E. Baty, and the Women's Protective Division, Mrs. Lola G. Baldwin, Superintendent, are hereto attached. Both these Divisions have done good work during the past year and are to be complimented upon the showing they have made.

The Bureau of Police has rendered excellent service and I can conscientiously say that no finer working force of men is to be found anywhere. While there has been occasion to dismiss or reprimand a number of officers for various violations of the Rules and Regulations, yet, as a whole, the conduct and discipline of the force has been very good.

I wish to express to the Honorable Mayor, the Commissioners and the various members of the Administration my appreciation of their hearty co-operation.

Respectfully submitted,

JOHN CLARK,
Chief of Police.

IN MEMORIAM

SERGEANT OF POLICE R. H. STAHL

Appointed May 13th, 1907.

Appointed Sergeant September 1, 1911.

Accidentally killed while on duty

January 27, 1915.

PATROLMAN J. C. GILL

Appointed February 19, 1908.

Accidentally killed while on duty

November 30, 1915.

NUMERICAL STRENGTH OF THE FORCE

Total Number of Employes			299
Appointed	16		
Reinstated	1	17	
Discharged	10		
Resigned	7		
Died	2		
Removed	1		
Transferred	2	22	5
Total Number of Employes November 30, 1914			304

Chief of Police	1	Patrolmen	224
Captain of Detectives	1	Stenographers	2
Captains of Police	3	Matrons	3
Superintendent, Women's Protective Division	1	Grappler	1
First Assistant, Women's Protective Division	1	Harbor Engineers	3
License Inspector	1	Plant Engineers (Headquarters)	4
Harbor Master	1	Janitors	3
Detective Sergeants	6	Elevatormen	2
Detectives	23	Temporary Employes—	
Lieutenant of Police	1	Chief Clerk	1
Sergeants of Police	15	Second Assistant, Women's Protective Division	1
		Elevatorman	1

From the above mentioned number of Detectives and Patrolmen the following are detailed:

DETECTIVES

1 Detective Sergeant as Bertillon Expert.
1 Detective as Bertillon Operator.
1 Detective as Dance Hall Inspector.
1 Detective as Parole Officer, Municipal Court.

PATROLMEN

1 City Attorney's Office.
1 District Attorney's Office.
1 Municipal Court, as Bailiff.
3 Detective Division.
5 Harbor Patrol.

THE MOTOR EQUIPMENT IN THE BUREAU CONSISTS OF

1 Pope-Hartford, 1912 Model Patrol Car.
1 Federal, 1½-ton 1914 Model Patrol Car.
1 Pope-Hartford, 1913 Model seven-passenger Touring Car.
1 White, 1913 Model seven-passenger Touring Car.
3 Indian, 1913 Model Motorcycles.
3 Indian, 1915 Model Motorcycles.
2 Harley-Davidson, 1914 Model Motorcycles.
1 Ford, 1914 Model five-passenger Touring Car for use in the Women's Protective Division.
12 Head of Horses used by the Mounted Squad.

	1915 Appropriation.	1915 Expended.	1916 Appropriation.
Personal Service	$388,620.00	$363,985.17	$367,520.00
Supplies	19,085.00	10,951.67	14,000.00
Material	588.00	580.88	525.00
Equipment	2,866.00	1,512.45	3,375.00
Construction and Extension	25,000.00	802.75	.....
Repairs	2,430.00	2,028.69	2,200.00
Light, Heat and Power	850.00	.....	.....
Janitorial Service	250.00	215.69	200.00
Transportation and Communication	5,276.00	4,889.19	1,525.00
General Plant Service	26.00	26.00	50.00
Contingencies	2,416.67	1,970.77	2,482.06
Fixed Charges			200.00
Totals	$447,407.67	$386,963.26	$392,077.06

WOMEN'S PROTECTIVE DIVISION, POLICE BUREAU

Portland, Oregon, December 1, 1915.

John Clark, Chief of Police, Portland, Oregon.

Dear Sir: The Women's Protective Division respectfully submits the following report:

This Division carries two separate and distinct lines of work. First, the Protective and Preventive branch, for which the service was organized; second, the Municipal Court Probation and Parole Department. The girls coming to us in our Protective and Preventive work are not in any way associated with the court cases. We have our own special detention room connected with our offices, so that the girl does not see the jail nor any of its inmates. The records are confidential and are kept in separate files.

This department has handled the cases of 619 new girls during the year. The number has been somewhat smaller than the previous year, which is due, in our judgment, to the approaching enforcement of prohibitory liquor laws. We have noted that greater care has been taken by men dispensing liquor in grills than ever before. We are expecting to see a still greater improvement in local conditions in 1916, as the statistics in this office show that almost without exception where girls have been allured into immoral lives, liquor has played a very important part.

We have made 509 special investigations, which do not include a vast amount of work not recorded. After-care has been given to 128 girls, many of whom have needed attention covering a long period. Owing to the lack of employment, many of our people have had to accept aid who were willing and able to work, and the hardship has fallen largely upon the women and children, so that it has been necessary as never before for this department to give assistance. We do not agree with those who maintain that economic conditions have nothing to do with immorality. We have worked in all instances with the Associated Charities, the County Board of Relief and the Muts, and have found a kindly spirit of co-operation in all these organizations. We have furnished 389 meals and 116 lodgings. We have handled the cases of 88 sick or insane girls and have sent 72 to institutions, which include hospitals, rescue homes, and state and county institutions. Seventy-three girls have been reported runaway

or missing. Many of these are from outside towns and have been located and returned to their homes.

In our Probation and Parole Department we have had 163 cases in court and 23 have been placed on parole to us. The Morals Court, to which practically all our girls are taken, has worked a revolution in hearings where women are involved, and this department is frequently called upon to make investigations in other cases where the Municipal Judge desires further information.

In the case of first offenders, probation or parole has borne excellent results, but we find that little can be done for those who have transgressed a number of times; and it is a great pity that the Detention Home for the latter cases has been deferred, as there is no adequate provision for such women at present. Jail sentences are wholly ineffective. Experience has taught that employment under favorable conditions is absolutely necessary for moral recovery.

Special attention has been given to cases of venereal disease, wherein we have been assisted by the Emergency Hospital.

We have held 2,233 personal interviews, and our incidental expenses for the year were $517.94.

The automobile which was added to our equipment last year has been of the greatest service by day and by night.

Respectfully submitted,

LOLA G. BALDWIN,
Superintendent Women's Protective Division.

PORTLAND POLICE, DETECTIVE DIVISION

December 1, 1915.

John Clark, Esq., Chief of Police, Portland, Oregon.

Dear Sir: I have the honor to submit herewith, the annual report of the Detective Division for the year ending November 30, 1915. In this report is given a summary of the more important cases handled and cleared up during the fiscal year, including the yearly report of the Bertillon and finger-print branch of the Division, the amount of lost and stolen property recovered and the number of missing persons located.

The past year has been a very busy one but, as the attached report will show, we have been successful in keeping crime down to such an extent that a comparison of the total figures of last year's with those of 1915 will show a material decrease.

We have caught a great many burglars and hold-up men who have operated here, as well as in other cities on the Coast, and have also apprehended several very clever forgers.

As the following summary will show, we believe we have made a very satisfactory record for the year just ended.

We extend to His Honor, the Mayor and the members of the Commission, a cordial invitation to visit our Division any time and will always welcome any suggestions or recommendations that may be made toward the improvement and benefit of same.

Respectfully submitted,

C. E. BATY,
Captain of Detectives.

SUMMARY OF CASES REPORTED, INVESTIGATED AND CLEARED UP DURING THE YEAR ENDING NOVEMBER 30, 1915

TITLE	Reported.	Cleared Up.
Larceny	2,568	1,083
Larceny by Bailee	33	29
Laceny from Person.	78	53
Larceny by Embezzlement	11	10
Forgery	52	51
Burglary	284	232
Hold-up	69	27
Bunco	18	13
Bad Check	114	92
Carrying Concealed Weapons	7	7
Threatening to Kill	15	15
Assault with Dangerous Weapons	17	16
Murder	3	2
Manslaughter	1	1
Obtaining Money by False Pretenses	12	12
Pickpocket	18	18
White Slavery	3	3
Violating Pawnshop Ordinances	7	7
Rape	7	6
Kidnapping	1	1
Safe Burglary	3	2
Counterfeiting	1	1
Smuggling	1	1
Arson	4	4
Fugitives Returned (Portland)	25	25
Fugitives Captured (Other Cities)	73	73
Miscellaneous Cases	28	27
Totals	3,454	1,811

Total Arrests Made by Detective Division	2,175
Missing Persons Located	241
Criminal Circulars Indexed and Filed	3,000
Estimated Value of Lost and Stolen Property Recovered (Automobiles Excluded)	$49,519.70

REPORT OF BERTILLON AND FINGER-PRINT BRANCH FOR THE YEAR ENDING NOVEMBER 30, 1915

Bertillon Record Received	7,235
Finger-Print Records Received	4,830
Identifications Made	285
Persons Photographed	441
Photographs Printed for Exchange	6,036
Photographs Copied for Local Use	38
Photographs Printed from Copies	482
Penitentiaries exchanged with	1

EXTRA

Photographs Made for San Francisco on Account of Fair	210
Cards Made for San Francisco on Account of Fair	35
Cards Made for Southern Pacific Special Agents	37
Photographs Made for Southern Pacific Special Agents	37
Photographs Printed for Government Agents	105
Cities Exchanged With	10
Photographs Printed for Customs Officers	18

ANNUAL REPORT OF CHIEF OF POLICE

Number of officers belonging to station November 30, 1915	299	Number of foreigners	8,090
Number of officers absent from duty	572	Number of females	1,368
Days including vacations	6,276	Number of minors (males)	1,180
Number of arrests	20,559	Number of minors (females)	106
Number of males	19,191	Males provided with lodgings	2,068
		Females provided with lodgings	15

NATURE OF CRIME

Accepting earnings of prostitute	10
Automobile no light	95
Automobile muffler open	99
Automobile exceeding speed limit	806
Automobile no license	36
Automobile on sidewalk	4
Allow minor in saloon	5
Attempt to to obtain goods false pretense	1
Allow minor in poolroom	15
Allow chickens to run at large	24
Allow stock to run at large	10
Lodger	8
Attempt suicide	16
Attempt to commit robbery	4
Attempt to commit rape	5
After hours	156
Adultery	21
Assault and battery	339
Assault with a dangerous weapon	39
Assault with intent to kill	5
Assault armed with dangerous weapon	12
Assault and rob, armed with dangerous weapon	24
Burglary	76
Burglar tools in possession	2
Bench warrant	2
Violate game laws	2
Surrendered by bondsmen	1
Contempt of court	6
Cruelty to animals	38
Carrying concealed weapon	62
Concaine in possession	2
Conduct business no license	40
Conduct bawdy house	77
Conduct disorderly house	7
Conduct disorderly saloon	1
Conduct lottery game	70
Conduct opium joint	20
Conduct gambling game	70
Contributing to delinquency of minor	18
Maintain nuisance	1
Chauffeur no license	36
Kidnapping	2
Drunkenness	6,655
Drunk and disorderly	401
Disorderly conduct	870
Disorderly by fighting	151
Destruction of personal property	7
Disturb religious meeting	1
Defrauding an innkeeper	42
Discharging firearms in city limits	12
Inciting riot	18
Dangerous assault	1
Demented	103
Deserter	1
Eng she in possession	11
Employ female unlawfully	2
Fugitive from justice	86
Frequenting opium joint	18
Forgery	34
Give liquor to a minor	1
Gambling and visiting gambling house	147
Held as witness	165
Held for investigation	640
Highway robbery	20
Druggist sell liquor not require signature	1
Indecent and immoral act.	198
Indecent exposure	19
Insane	1
Arson	3
Impersonate an officer	5
Interfere with an officer	9
Inmate of a bawdy house	1
Junk dealer no license	3
Keep dog no license	291
Knowingly utter a forged check	8
Leave team untied	18
Lottery ticket in possession	51
Larceny	527
Larceny in a store	7
Larceny from the person	14
Larceny in a dwelling	56
Larceny by bailee	43
Larceny by embezlement	22
Lewd cohabitation	28
Lost children brought to the station	89
Injured persons assisted	165
Murder	3
Manslaughter	4
Motorcycle speeding	185
Motorcycle no light	8
Minor in a pool room	25
Morphine in possession	5
False fire alarms	2
Parole violators	2
Non-support	3
Overload teams	1
Obscene pictures in possession	5
Lost persons	3
Obstruct street car traffic.	5
Obstruct sidewalk	9
Obstruct street	19
Obstruct street no red light	1
Obtaining money false pretense	49
Obtaining goods false pretense	3
Opium in possession	16
Pass counterfeit coin	2
Peddling no license	57
Allow wife in house of prostitution	1
Prisoners en route	41
Polygamy	2
Perjury	3
Poolroom no license	1
Point gun at another	2
Reckless driving	201
Ride bicycle on sidewalk	1
Ride motorcycle on sidewalk	10
Maintain gambling device	1
Resisting an officer	5
Rape	7
Runaway children	51

Refuse to move on	4
Sell short weight and measure	6
Sell liquor no license	39
Sell impure foods	22
Sell liquor on Sunday	22
Sell cigarettes to a minor	21
Sell liquor to a minor	17
Sell liquor to an Indian	1
Sell liquor person already intoxicated	12
Sell lottery tickets	1
Sell liquor to women	1
Smoke opium	6
Sell opium	1
Attempt to purchase morphine no prescription	1
Sick and destitute	184
Scavenger wagon no license	11
Scavenger wagon leaking	5
Safe keeping	2
Sodomy	3
Soliciting on street	2
Soliciting for prostitution	43
Motorcycle muffler open	23
Seduction	2
Saloon open on Sunday	1
Stolen goods in possession	17
Sturdy beggars	79
Threat to commit murder	2
Trespass	88
Threaten to kill	58
Throw rubbish in street	7
Use profane language	85
Vagrancy	3,314
Violate city ordinance	354
Violate pawn brokers ordinance	46
Vicious dog at large	14
Visit bawdy house	2
Visit house of prostitution	1
Visit lottery game	92
Visit gambling game	948
Violate mashers ordinance	20
Violate vehicle ordinance	83
Violate bill posters ordinance	12
Violate traffic ordinance	853
Violate building ordinance	38
Assault	1
Hypodermic needle in possession	2
White slavery	6
Minor tobacco in possession	10
Driving auto while intoxicated	22
Held for U. S	25
Conducting marriage brokerage	1
Delinquent juvenile	3
Failing to procure employment	1

MISCELLANEOUS

Auto reported stolen	485
Auto reported stolen and found	374
Ambulance calls	155
Accidents	728
Missing persons	154
Dead bodies	140
Dead animals	696
Defective lamps, arc	1,865
Fire alarms given	367
Injured persons assisted	755
Lost children reported	1,018
Nuisance notices served	691
Sidewalks reported for repair	407
Street obstruction reported	735
Stray teams put up	170
Suicides reported	56
Water running to waste	650
Motorcycle calls	2,343
Wagon calls	9,519
Municipal Court receipts	$28,085.20
Board of prisoners, City Jail	$ 4,027.52

Respectfully submitted,

J. S. THOMPSON, Record Clerk.

BUREAU OF HEALTH

Hon. H. R. Albee, Mayor and Commissioner of the Department of Public Safety, Portland, Oregon.

Dear Sir: The year ending November 30, 1915, is replete with many things denoting progress by the Bureau of Health in your Department of Public Safety. Most notable among these is the low mortality rate, which includes the remarkably low infant mortality rate. Also, the wonderful showing made in the milk contest at the Panama-Pacific International Exposition at San Francisco, California, which will be mentioned more in detail in the body of the following report:

MORTALITY RATE

The crude death rate from all causes as estimated by the Division of Vital Statistics, Bureau of Census, Department of Commerce, of the United States Government at Washington, D. C., is 9.1 per one thousand, while for 1913 it was 9.5 per one thousand, thus showing a decrease of .4 of one per one thousand for 1914. The death rate from all the communicable diseases was much lower than in the preceding year. In 1914 it was 11.3 per thousand, while in 1915 it was only 6.5 per thousand, showing a decrease of 4.8 per thousand. In making a comparison in the infant death rate from diarrhea and enteritis under one year of age it is found that there is a reduction from 15 in 1914 to 14 in 1915.

MAIN OFFICE DIVISION

CLERICAL SUB-DIVISION

The work of the clerical force has been increased very materially during the past year by the passage of the State Registration Act. Under this new law approximately 150 supplemental birth reports have to be mailed each month to parents whose children were not named when the birth certificates were filed by the attending physician. When these are returned the given name must be entered both on the original certificate and in the birth record book. The supplemental certificate is then properly filed. Four hundred and one physicians, midwives and undertakers were registered with the Bureau of Health under this same law during the year. The burial permits, which contain more data than previously, are now returned to the Bureau for checking up and filing.

The filing has increased during the past year. This is shown by the fact that during the year 1914, 980 communications were received and 835 sent out, while during 1915, 2,597 communications were received and 4,076 mailed out.

The sum of $139.95 was received for certified copies of births and deaths and deposited with the City Treasurer; $140.05 received for antitoxin given diphtheria patients was also deposited with the Treasurer.

Again, I would urge the advisability of installing a switchboard in the Health Bureau with a "central," who would also act as a complaint clerk. I believe this would do away with the annoyance of transfers. Under statistical reports will be found a complete tabulation of births, deaths and contagious diseases.

MEDICAL DIVISION

MEDICAL INSPECTION OF SCHOOLS

The objects of medical inspection in the schools are the detection and prevention of communicable diseases and the determination of all abnormal physical findings in the child that may interfere with health and mental progress.

With a school enrollment of about 30,000, distributed among 59 schools, it is possible to inspect each school only about once a month. At the first inspection each year the child is gone over as thoroughly as conditions will permit, and an advice card to the parents is given where needed. These cards are advisory only and, while a reply is urged, nothing in the way of treatment is required. Many abnormal conditions are reported to the parents. Thereafter inspectors and nurses are concerned chiefly with contagious conditions. The good derived from these advice cards is enormous, and it is a pity that more thorough examination and a closer following up of the results of such advice and treatment is impossible owing to the small force of inspectors.

It can readily be seen that one inspection a month cannot prevent all communicable diseases from spreading in the schools, as a child may break out with measles, for instance, the day after the inspector has been at that school and remain there infecting others for several weeks. In such cases the inspector gives his entire time to that school, and in this way serious epidemics are often avoided. Such epidemics are always avoidable if inspections could be made oftener.

Looked at solely from an economic point of view, it is certain that the increased expense for additional medical inspectors and nurses could be offset each year by the saving to those afflicted from sickness as well as the cost of supply to the city for those held in quarantine, to say nothing of the school attendance.

Each year for the past three years an additional appropriation for an increase in the number of school inspectors and nurses has been disallowed, although it has been earnestly requested. The statistical reports of the School Inspection Subdivision will be found at the conclusion of the report.

DENTAL CLINIC

You will note in this department an increase in the work of nearly 50 per cent over last year. Even with this increase only a small number of deserving cases could be cared for. An improvement in this work would be the devotion of at least a half day every day of the week, instead of the present arrangement of one whole day each week. The statistical report of this division will follow.

COMMUNICABLE DISEASES

There have been no particular changes made in the handling of these cases during the past year.

Were it only possible to impress upon the parent or guardian more emphatically the importance to themselves and the community of an early correct diagnosis of all eruptive diseases, the problem of their diminution would soon be easily accomplished. It often happens that only by the most diligent and laborious efforts on the part of the Health Bureau is the City able to trace and quarantine contagious cases that apparently are well known to the neighbors, but who feel that they are "informers" if they report the case to this office, and

these people are the very first to offer criticism for the spread of contagion.

One such case occurred in one of the suburbs. A boy was delivering papers during the peeling stage of scarlet fever. His father was extremely indignant when we located and quarantined him. Two of his neighbors were discovered in the peeling stage and quarantined the same day. Many other cases soon developed. Had it not been for this one portion of the City, there would have been exceptionally few cases of scarlet fever this winter.

CULTURES FOR DIPHTHERIA

Three thousand seven hundred and thirty cultures have been taken by this Bureau for diagnosis and release of diphtheria.

EXAMINATIONS—PHYSICAL

One thousand and two physical examinations for entrance into Civil Service and other reasons have been made by the physicians of this Bureau during the last year.

DETENTION HOSPITAL

The City is sadly in need of a suitable place for a temporary detention hospital where we could isolate a suspicious contagious case for 24 to 48 hours.

QUARANTINE NURSE

It is suggested that a trained nurse be employed whose sole duty would be to visit quarantined families. The small force of the Medical Division does not afford any opportunity to visit a family except to quarantine and inspect for release, while if there was a nurse for this purpose she could instruct them in many professional ways, giving them a great deal of assistance and good advice. Quarantine would be observed more strictly, a more kindly feeling would prevail and the Bureau would be kept in closer touch with these cases.

LEPROSY

A case of leprosy was isolated at the Smallpox Hospital grounds during the year. As far as is known this is the only case of its kind ever handled by the authorities of the City of Portland.

TRANSPORTATION OF PATIENTS

One hundred and fifty-one patients have been transported by the privately owned machines of several of the physicians in the Medical Division. Many of these were sent to the Smallpox Hospital, when the charges would have been from $12 to $14. At an average rate of $8 per patient the saving to the City has been $906.00, for which it has only paid out the cost of the upkeep and absolutely nothing for deterioration of the automobile.

MUNICIPAL HOSPITALS

The following is a report of the number of patients cared for by the Bureau of Health during the year beginning December 1, 1914, and ending December 1, 1915:

At the Emergency Hospital, 1,387 cases were treated for a total of 2,227 days, or an average of about two days for each patient.

St. Vincent's Hospital, 55 cases treated for a total of 798 days, making an average of 14½ days for each patient.

At Good Samaritan Hospital, 79 cases were treated for a total of 746 days, making an average of about 9½ days for each patient.

The rule that all men in the Fire Bureau who are off duty either through illness or injury must be visited by the City Physician has been in effect this year. This rule requires a visit to be made in person and a report to be submitted to the Fire Bureau as to the condition of the patient, nature of illness or injury, and if injury, cause thereof.

There were 110 of the foregoing cases reported for first visit, besides many who were off two weeks or more required additional reports, or the reports of other physicians had to be corroborated.

It is the custom among some of the foremen of the various City Departments to send their men, who are ill or injured while working for the City, to the City Physician for treatment as City cases, and sometimes it is more difficult to explain to them that the City does not maintain a physician for it's employees, than it is to treat them, so that they are taken care of either in the private office of the City Physician or the Emergency Hospital.

There seems to be a growing demand upon the City Physician, whose duties should only be those of Police Surgeon, to care for people who come into Portland from surrounding counties. They are mostly people who have no regular place of residence, but have been living outside of Portland. When ill, they come here for treatment because they have no money, rather than remain where they were living.

Attached hereto find a monthly report covering the various hospitals.

TUBERCULOSIS SUBDIVISION

The report of the Tuberculosis Nurse is attached herewith and is indicative of more assistance in this very important branch of Public Health Work.

BACTERIOLOGICAL LABORATORY

The laboratory work has increased markedly and it is largely due to this fairly well equipped institution and the excellent ability of Prof. E. F. Pernot, and his assistant, Miss A. C. Trenchard, that contagion is very low. The bacteriologist's statistical report will be attached hereto.

A wide field is covered by the Sanitary Division which aims, not only to protect the community from the carelessness and indifference of the individual, but also endeavors to assemble all those forces and influences which will contribute to ideal health conditions and a lower death rate, such as: clean and pure food, the proper disposal of waste and garbage, good ventilation, and the numerous other things coming within the range of sanitation.

To do this satisfactorily and adequately with the small force of inspectors has been a physical impossibility, particularly with very insufficient transportation facilities.

In the interest of economy, but at a disproportionate expense to the service at a season when the work was a little slack, the chief Sanitary Inspector was laid off. Contrary to expectations, this endeavor to save a little money temporarily resulted in the office being abolished when the budget was allowed for 1916. It also cut out two inspectors, much to the detriment and crippling of the service.

The reduced force gives to the entire East Side, from Sellwood to St. Johns, a distance of approximately twelve miles, and from the

river to the extreme eastern limits of the city, but three inspectors who have time for little else than the answering of complaints. The same condition exists on the West Side with but two inspectors to cover the territory extending from Fulton Park to Linnton, a distance of approximately fourteen miles, and from the river to the extreme western limits of the city, while the inspector of bakeries and food factories covers the entire city on both sides of the river. This force includes both sanitary and market inspectors, who have to depend entirely upon street cars for transportation.

The Health Officer, with all his other duties, has been compelled to act as director and supervisor of all this work.

A trained, up-to-date Chief Sanitary Inspector is an absolute necessity for a town the size of Portland. He should be one with peculiar qualifications for the work, and specialized training, which not only includes a general knowledge of sanitation and all conditions contributing to health, but must have a fair knowledge of construction, engineering and economy.

FOOD INSPECTION

MEATS

Never has the need for meat inspection been so much in evidence as within the past year. With meat of all kinds at a premium, the temptation to market the diseased and unfit has brought into our markets quantities of unwholesome and dangerous meat. Proper inspection would have perhaps saved the four victims of trichinosis, and certainly have prevented hundreds of pounds of Cholera infected pork from getting into the shops of the city.

Steadily, through session after session of the Council, was the proposed ordinance argued, finally resulting in its passage. An appeal was taken to the Circuit Court and the ordinance was sustained. It was then appealed to the Supreme Court where it has slumbered for nearly a year.

MARKETS

The Public Market has injected many new problems into market conditions. Adjusting the open stall to the ordinance requiring foods to be covered has required great tact and an exercise of exact justice.

RESTAURANTS

Much of the time of our inspectors has been given to making a thorough survey of the restaurants, and the improved conditions give evidence of the efficient work. Scoring the restaurants has materially improved the condition of these places and brought about a better understanding between proprietors and inspectors.

The small amount of capital required for opening the cheaper class of restaurants, and the so-called Candy Kitchens, emphasizes the importance of an ordinance requiring places where food is sold, or prepared for sale, to be inspected and approved before they are occupied for such purpose.

BAKERIES

Bakeries are showing a constant improvement by enlarging their plants, introducing more machinery and exercising more care in the matters of sanitation and hygiene. They have been particularly active in the campaign against flies and have complied generally with the request for health certificates from their employees.

FLY CAMPAIGN

To exterminate the house fly is a large and very important factor in all sanitary work. Spasmodic campaigns not having proved an entire success, an "all-the-year-around" campaign was inaugurated last summer. A constant and persistent effort was made to destroy the breeding places, such as manure piles, open garbage cans, and obnoxious dumping grounds.

With few exceptions every grocery store, meat market, bakery, restaurant and every place where food was kept was screened. Hundreds of fly-traps were set, and every known device used to get rid of them.

RATS

As Portland, like all other Pacific Coast cities, faces the constant menace of Bubonic Plague and other Oriental diseases, it was thought advisable to make a thorough test of the carriers. Two inspectors were detailed to the work of trapping rats in different parts of the city, and within a few weeks 862 had been secured and brought in for bacteriological examination, all of which proved negative.

VENTILATION

Special attention has been given to this phase of sanitation. Theaters, public halls and schools, office buildings, factories and sleeping apartments have been scientifically tested and conditions much improved.

MILK AND DAIRYING SUBDIVISION

TUBERCULIN TESTING OF COWS

During the past year two inspectors have confined their work to the tuberculin testing of dairy cows whose milk is consumed in the raw state. They are finding less reactors each year, and since the the state and county reimburse the dairyman to the extent of $25.00 for each reactor the work has gone along with little opposition from the owners. Two inspectors are not able to test the herds once a year as required by ordinance, but where they find a number and fear the spread of the disease a retest is made in six months.

As tuberculin is provided by the Federal Government free of cost, it now insists that post-mortems be made on all reactors when slaughtered. This takes a great deal of time, as many of the reactors are slaughtered on the farms. Reactors are slaughtered almost as soon as found to prevent the possibility of infected milk being sold.

CLEAN MILK

The problem of securing clean milk, is the problem the inspector has to contend with. He is expected to instruct the dairymen how to reduce contamination to the least possible factor, and teach them that only by scrupulously clean cows, clean, well ventilated stables, sterilized utensils, milk properly cooled and handled in a sanitary manner, can a minimum of contamination be obtained. New dairy barns and milk houses are being constructed according to plans furnished from the Health Office, and many improvements are being inaugurated for the betterment of the milk supply.

The service is greatly crippled for the want of better transportation for the inspectors. Long distances have to be covered beyond the reach of car service, and the time consumed in covering these distances on foot is an expensive proposition for the City.

MILK ANALYSIS

Portland consumes about 20,000 gallons of milk per day. Approximately two-thirds is delivered by the retailer in bottles to the homes, and the remaining one-third is sold at wholesale in cans. More than 85 per cent of the milk consumed in the City is produced within a radius of 15 miles of Portland, and reaches the consumer comparatively fresh. About $2,290,000 is paid by the consumers of milk per year. From nearly 5,000 samples collected promiscuously from the different wagons and restaurants, very few adulterations are found.

All samples brought in by the city collectors are taken to the milk laboratory where a duplicate plate is run on each and every sample, and from this are determined the methods which the producer uses in producing and handling his milk. When the producer has a high count an inspector is sent to investigate conditions at the dairy and to try to ascertain the cause, and invariably succeeds in locating the source of contamination.

MILK CONTESTS

During the year the Bureau of Health has held two contests under the supervision of Mr. F. H. Bothell, Western Investigation, United States Department of Agriculture. These milk contests for the past two years have been beneficial both to the dairymen and milk dealers, as well as to the public. From the producers and dealers standpoint the contest system has proved a success. Through it they have received the reward, in dollars and cents, that the quality of their goods merited.

The competition is so great that every dairyman is an inspector without pay, and all dealers refer to their rating in the City Milk Division when soliciting business.

INTERNATIONAL MILK CONTEST

At the International Milk Contest, held at San Francisco in June, Portland carried off more medals and diplomas than had ever been done by any city or state previously. It being Portland's first entry into a contest of such magnitude, the largest ever held, and the second it had ever entered, the results were marvelous, and the entire state is to be congratulated upon the showing made. It has advertised Portland, possibly more than anything that has ever been accomplished by its citizens. The detailed results of the contest are as follows:

A gold medal and $100.00 in gold for first place in the Board of Health class; that is, the highest average score for ten regular samples, regardless of class. Portland's score was 95.7 out of a possible 100 points.

A gold medal for the largest number of samples; there being 136 entries.

A gold medal to the Portland Pure Milk & Cream Company for the highest average score of 10 regular samples in Milk Dealers Class.

A silver medal for second place to the Damascus Creamery for pasteurized milk.

A bronze medal for third place to the Hygiea Creamery for pasteurized milk.

A bronze medal for third place to the Willamette Creamery for pasteurized cream.

Sixty-six diplomas of merit for a score of 90 points or over.

Twenty-six entries secured scores of 94 or over, and the statement

of the judges was "that the milk from Portland was the best ever produced."

INFANT MORTALITY

It is a significant fact, that as the milk supply of the City has improved the infant mortality has been proportionately decreased each year, as mentioned hereinbefore, and as shown by the tabulated statement accompanying this report.

SUMMARY

To accomplish all these results has been a slow process of evolution, accompanied by diligent effort, requiring both the dairymen and the public to adjust themselves to a new order of things. Our methods have been those of co-operation rather than of coercion, and the results with the producers have proven the wisdom of the method, while averaging over 300 telephone calls for information from housewives every month evidences the value of this subdivision of the work, to the public. During the year we have issued permits for licenses to the amount of $1,874.00. One more machine should be added to the department for the economic reasons stated above.

CONFERENCES

A series of conferences which have been held once a week with the various departments, where topics relating to their several departments have been discussed, has resulted in increasing the efficiency of the forces, and a much more intelligent execution of the work.

EXHIBITS

A very successful exhibit of the life cycle of the fly in one of the down town show windows was conducted during the fly campaign by this Bureau and it had a decidedly good effect from an educational standpoint. It was estimated that several thousand people saw the exhibit during the 18 waking hours of the day. The fly was literally hatched out while you waited.

The exhibit of Portland's entries of milk at San Francisco following the International contest was arranged by the City Health Officer, who accompanied the same to San Francisco, in the buildnig for Dairying and Livestock, where it remained for a few days when the Oregon Building Commission decided it should be in their building with other exhibits, which had taken prominent prizes. It was then moved to the Oregon Building, where it remained on exhibition for many weeks. This was possible because of the addition of preservatives.

SUGGESTIONS AND RECOMMENDATIONS

A Sanitary Code—The Health Officer and every member of the Bureau has felt an urgent need for the revision and codification of the ordinances pertaining to public health, which has been done, and it is respectfully recommended that the Council pass the same as soon as possible.

Many of the ordinances under which the Bureau is working have been in effect for 25 years; they were enacted before many of the offices and departments were created, and must now be stretched out of all recognition to cover the present day needs.

Our market ordinance has been in effect ten years and is wholly

out-grown. The detached condition of these ordinances, as they have been enacted separately from time to time, results in much confusion and waste of time, and their codification is an absolute necessity in the interests of efficiency and economy.

It is also recommended:

That additional school inspectors and nurses be appointed before the expiration of another school year, the present force being inadequate to properly supervise communicable diseases alone among a rapidly growing school population like that in Portland;

That additional dentists for the Dental Clinic be appointed as soon as possible to meet the increasing demand for this valuable work;

That additional automobiles be purchased for the use of the sanitary, market and bakery inspectors. The most efficient inspection work can only be done when proper transportation facilities are provided;

That the Council should exert every effort to have the Meat Inspection Ordinance released by the Supreme Court in order that better and more wholesome meat might be provided for Portland consumers;

That more physicians should be appointed to assist in the Medical Division, either in the capacity of District Medical Inspectors or otherwise. The issuance of permits to school children should be done only by physicians, upon whom the responsibility for the same has been placed by the Council. If the force was adequate more thorough quarantine for whooping cough, measles, chickenpox and mumps could be maintained and this is coming to be of more importance than is generally realized; and

That the Emergency Hospital and the staff for the conduct of the same be transferred to the Police Bureau, where it rightfully belongs, and that the appellation of "City Physician" be changed to that of Police Surgeon.

I wish to most heartily express my appreciation of the co-operation of the Mayor and the other members of the Council, individually and collectively, in the important public health matters that the Health Bureau has referred to them.

Respectfully submitted,

M. B. MARCELLUS,
City Health Officer.

BIRTHS

	Male	Female	White	Brown	Black	Yellow
December, 1914	161	167	322	4	2	0
January, 1915	180	189	361	7	0	1
February	147	164	305	4	0	2
March	192	195	376	5	2	4
April	136	146	273	4	1	4
May	185	175	355	4	1	0
June	182	163	340	4	0	1
July	187	168	347	6	0	2
August	208	166	365	5	0	4
September	179	168	338	8	1	0
October	215	181	386	7	1	2
November	151	130	274	6	0	1

INFANT MORTALITY

December 1, 1914, to December 1, 1915

PRINCIPAL CAUSES OF DEATH	No. Deaths Under 1 Yr.
Congenital debility (marasmus, inanition)	50
Prematurity	42
Bronchial pneumonia	26
Cerebral hemorrhage	20
Diarrhea and enteritis	12
Congenital malformation of the heart	12
Meningitis	11
Pneumonia	10
Convulsions	6
Intestinal obstruction	3
Acute bronchitis	2
Diphtheria	2
Other causes	42
Total deaths	238

AGE AT TIME OF DEATH

Under one day	46	or 19.3% of deaths under 1 year
1-2 days	29	
2-3 days	12	
3-7 days	19	
Under one week	106	or 44.5% of deaths under 1 year
1-2 weeks	24	
2-3 weeks	14	
3-4 weeks	12	
Under one month	156	or 65.5% of deaths under 1 year
1- 2 months	23	
2- 3 months	10	
3- 6 months	21	
6- 9 months	10	
9-12 months	18	

The following is a tabulation of deaths under one year of age per one thousand births since 1909:

	Number Deaths.	Rate Per 1000 Births.
1909	288	94
1910	324	95.4
1911	329	88.2
1912	319	78.4
1913	276	74.1
1914	266	63.4
1915	238	57.7

The following is the tabulation of deaths from diarrhea and enteritis under two years of age since 1909:

	Number Deaths.	Rate Per 1000 Births.
1909	100	32.6
1910	73	21.5
1911	57	15.2
1912	38	9.3
1913	29	7.7
1914	15	3.6
1915*	14	3.4

*On a basis of 4,122 births for the year.

PORTLAND PUBLIC SCHOOLS, 1915

Enrollment day school	31,478
School buildings	63
High schools	5
Trade schools	2
Backward schools	1
Detention schools	1
Deaf and blind school	1
Number of teachers employed:	
1908	584
1910	702
1912	878
1915	1,108
Number of inspectors employed	4
School nurse	1

MEDICAL DIVISION

REPORT OF SCHOOL NURSE

Number of pupils examined	12,886
Visits to homes of pupils	794
Number of pupils referred to specialists	261
Number of cases referred to Charity Association	84
Pupils taken to dispensary	23
Number of visits to schools	291
Miscellaneous calls	164
Diphtheria	2
Scarlet fever	6

REPORT OF SCHOOL INSPECTORS

Examined	145,031	Anemia	3
Impetigo	227	Paralysis, infantile	12
Scabies	55	Hemophilia	1
Chickenpox	84	Ichthyosis	5
Pediculosis	514	Keloid	1
Ringworm	114	Smallpox	8
Tonsils and adenoids	3,856	Contagious conjunctivitis	44
Defective nasal breathing	27	Whooping cough	6
Defective eyes	319	Miscellaneous skin diseases	99
Defective ears	81	House calls	640
Skin, non-contagious	63	Measles	5
Throat cultures	1,580	Cleft palate	4
Goitre	48	Cataract	2
Defective teeth	10,452	Scarlet fever	9
Malnutrition	16	Diphtheria	9
Orthopedic defects	25	Vaccinations	76
Eczema	28		

REPORT OF FREE DENTAL CLINIC

Year Beginning September, 1913, to June 30, 1914, Inclusive	
Number of sittings	377
Number of fillings	585
Number of treatments	110
Number of extractions	198
Number of teeth cleaned	200
Year Beginning September, 1914, to June 26, 1915, Inclusive	
Number of sittings	670
Number of applicants worked on	350
Number of amalgam fillings	503
Number of cement fillings	371
Number of root canals	72
Number of treatments	156
Number of extractions	447
Number of cleanings	184
Number of pulps capped	5

COST OF OPERATING CLINIC ONE DAY A WEEK FOR ONE YEAR

Dental supplies	$112.80
Laundry	5.00
Salary of operator	400.00
Salary of assistant	100.00
Value of equipment	550.00

REPORT OF TUBERCULOSIS WORK FOR YEAR ENDING NOVEMBER 30, 1915

Number patients under observation December 1, 1914		60
Number new patients admitted during year		228
Number old patients readmitted during year		13
Total number of patients under observation		301
Number of nursing and advisory visits		1,383
Number of co-operative and miscellaneous visits		358
Total number visits for year		1,742
Disposition of patients:		
Improved		12
Sanatoria		97
State Sanatorium	48	
Troutdale	45	
Open Air	4	
Hospitals		8
Not tuberculous		32
Other care		24
Left city		19
Died		25
Untraced		12
Discharged self		14
Total number patients discharged during year		243
Remaining under observation December 1, 1915		58
Number quarts milk to patients		1,533
Number dozen eggs to patients		173

REPORT OF TUBERCULOSIS DIVISION, PORTLAND FREE DISPENSARY, ENDING NOVEMBBER 30, 1915

Number patients under observation December 1, 1914		61
Number new patients admitted during year		195
Number old patients readmitted during year		21
Total number patients under observation		277
Total number visits to clinic by all patients during year		1,501
Total number serum treatments by patients during year		1,056
Disposition of patients:		
Improved		8
Sanatoria		47
State Sanatorium	26	
Troutdale	21	
Hospitals		12
Other care		16
Not tuberculous		64
Non-attendance		41
Left city		15
Died		2
Untraced		17
Discharged self		4
Total number patients discharged during year		226
Total number patients remaining under care December 1, 1915		51
Number quarts of milk to patients		1,043
Number dozen eggs to patients		122

EMERGENCY HOSPITAL

	Number Treated.	Number of Days.
December, 1914	69	122
January, 1915	77	102
February, 1915	152	309
March, 1915	173	245
April, 1915	74	191
May, 1915	98	180
June, 1915	139	229
July, 1915	135	214
August, 1915	120	161
September, 1915	133	183
October, 1915	124	153
November, 1915	93	138
Totals	1,387	2,227

ST. VINCENTS HOSPITAL

	Number Treated.	Number of Days.
December, 1914	10	157
January, 1915	10	187
February, 1915	3	57
March, 1915	4	59
April, 1915	3	22
May, 1915	3	39
June, 1915	2	14
July, 1915	2	18
August, 1915	5	65
September, 1915	5	38
October, 1915	2	28
November, 1915	6	114
Totals	55	798

GOOD SAMARITAN HOSPITAL

	Number Treated.	Number of Days.
December, 1914	5	12
January, 1915	9	58
February, 1915	7	96
March, 1915	5	57
April, 1915	5	39
May, 1915	11	70
June, 1915	6	61
July, 1915	4	54
August, 1915	3	11
September, 1915	11	84
October, 1915	7	125
November, 1915	6	69
Totals	79	736

BACTERIOLOGICAL LABORATORY

BACTERIOLOGICAL WORK

The major work has been of a routine character, consisting of:

Diphtheria cultures	5,782
Sputum examinations for tubercle bacilli	225
Widals for typhoid fever	105
Analysis of water	89
Analysis of milk, bacterial count	3,574
Analysis of laundry napkins	37
Analysis of rats for bubonic plague	862
Analysis of urine	445
Examinations of meat for trichina	14
Miscellaneous examinations	413
Total	11,546
Klebs Loeffler blood serum tubes prepared	5,911

Quite a large number of specimens have been mounted and preserved for museum and educational purposes.

MARKET INSPECTION

Inspections made	29,183
Complaints by citizens	1,277
Notices served, written and verbal	6,355
Condemned:	
Fish, pounds	95,656
Meats, pounds	23,816
Poultry, pounds	3,587
Vegetables, pounds	163,566
Eggs, dozen	120
Fruits, pounds	308,900
Potatoes, pounds	13,080
Flour and meal, pounds	197,000
Money refunded on purchases	$370.80

SANITARY INSPECTION

Inspections made	16,658
Complaints by citizens	2,942
Complaints by inspectors	3,357
Notices served, written and verbal	7,435
Inspections for ventilation	348
Nuisances abated	4,744
Loads of rubbish destroyed	1,426
Loads of manure removed	1,877
Basements ordered cleaned	433
Garbage signs put up	1,225
Old toilets filled or moved	105
Buildings closed	19
Buildings condemned	13
Rats trapped	970
Laundry samples	36
Groceries, delicatessens, etc., inspected	1,763
Restaurants inspected	1,270

DAIRY AND MILK SUBDIVISION

DAIRY INSPECTION

Number of dairy herds tested for tuberculosis	264
Number of dairy animals tested for tuberculosis	4,355
Number of dairy animals reacting	473
Number of dairy animals suspicious	42
Number of dairy animals slaughtered	483
Number of carcasses passed for food	405
Number of dairy carcasses condemned	78
Number of inspections and scoring of dairies	1,938
Number of inspections of creameries and milk depots	123

CHEMICAL ANALYSIS OF MILK

Number of samples of milk and cream analyzed	4,861
Per cent of samples below standard	.8%
Average butter fat in milk	4.15
Average solids—not fat—in milk	9.10
Average per cent of butter fat in cream	23.0%

BACTERIOLOGICAL ANALYSIS OF MILK

(Certified Milk)

Under 10,000 ..... 90.00%
Under 20,000 .....100.00%

(Raw Dairy Milk Delivered by Producers)

Under 10,000 ..... 57.80%
Under 20,000 ..... 75.55%
Under 50,000 ..... 91.71%
Under 100,000 ..... 94.60%
Under 200,000 ..... 98.00%

(Raw Dairy Milk Delivered from Creameries and Milk Depots)

Under 10,000 ..... 44.26%
Under 20,000 ..... 66.96%
Under 50,000 ..... 85.10%
Under 100,000 ..... 93.96%
Under 200,000 ..... 99.53%

(Pasteurized Milk)

Under 10,000 ..... 68.24%
Under 20,000 ..... 73.95%
Under 50,000 ..... 86.91%
Under 100,000 ..... 93.28%
Under 200,000 ..... 97.18%

(Average of All Samples)

Under 10,000 ..... 65.07%
Under 20,000 ..... 79.11%
Under 50,000 ..... 92.60%
Under 100,000 ..... 95.46%
Under 200,000 ..... 98.67%

CONTAGIOUS DISEASES	Dec. 1914	Jan., 1915	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Total
Diphtheria	46	22	20	36	27	21	19	14	12	15	27	41	300
Typhoid fever	1	3	3	5	2	5	4	0	1	13	2	9	48
Small pox	6	3	15	30	6	20	30	21	6	5	7	3	152
Scarlet fever	7	11	13	22	11	17	10	4	1	7	36	33	172
Measles	6	8	2	17	25	42	57	24	8	2	3	3	197
Whooping cough	1	2	1	3	11	5	5	6	2	6	6	3	51
Chickenpox	27	57	83	153	59	29	28	10	4	5	22	31	508
Mumps	1	12	2	23	10	3	0	0	0	1	1	1	54
Poliomyelitis	0	0	0	0	0	0	0	0	0	0	0	1	1
Erysipelas	5	5	4	3	1	2	1	3	0	0	3	1	28
Tuberculosis	18	17	21	22	29	23	19	30	20	20	32	27	278
Meningitis	0	0	1	0	0	0	0	0	0	0	1	1	3
Leprosy	0	0	0	0	0	0	0	0	0	1	0	0	1
Enteric fever	0	0	0	0	1	0	0	1	0	0	0	0	2
Totals	118	140	165	314	182	167	173	113	54	75	140	154	1795
DEATHS													
Males	128	121	109	98	112	116	117	89	110	111	119	103	1333
Females	98	100	84	82	71	96	71	73	67	72	65	80	959
	226	221	193	180	183	212	188	162	177	183	184	183	2292
Oregon	49	56	44	30	30	51	47	37	46	39	38	39	506
United States	98	99	86	92	75	89	73	72	75	87	72	84	1002
Foreign	72	61	53	55	66	68	60	48	45	53	64	54	699
Unknown	7	5	10	3	12	4	8	5	11	4	10	6	85
	226	221	193	180	183	212	188	162	177	183	184	183	2292
White	216	213	188	175	178	208	180	155	171	176	175	177	2212
Yellow	7	4	3	4	1	3	4	5	3	2	5	3	44
Black	2	1	1	1	3	1	3	1	2	0	3	2	20
Brown	1	3	1	0	1	0	1	1	1	5	1	1	16
	226	221	193	180	183	212	188	162	177	183	184	183	2292
Still-births	14	11	13	15	16	17	11	13	12	15	12	11	160

GENERAL DISEASES	Dec., 1914	Jan., 1915	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Total
Typhoid fever	2	1	3	1	1	1	....	....	....	1	2	2	14
Malaria	....	....	....	....	....	....	....	1	1	1	1	....	4
Smallpox	....	....	....	....	1	....	....	....	....	....	....	....	1
Measles	....	....	....	1	....	1	1	....	....	1	....	....	4
Scarlet fever	....	....	....	....	....	1	....	....	....	....	....	....	1
Whooping cough	....	....	....	....	....	1	....	2	1	....	1	....	5
Diphtheria	6	2	....	3	1	2	....	....	3	2	2	2	23
Influenza	2	1	2	2	....	1	2	....	....	....	1	....	11
Dysentery	....	....	....	....	....	....	....	....	....	2	....	....	2
Erysipelas	1	1	....	1	....	1	....	....	....	....	....	....	4
Other epidemic diseases	....	....	1	....	....	....	....	....	....	....	....	....	1
Purulent infection and septicemia	....	....	....	....	2	1	....	1	....	....	....	....	4
Pellagra	....	....	....	....	....	1	....	....	....	....	....	....	1
Tuberculosis of lungs	16	17	14	10	11	21	17	14	8	22	12	19	181
Acute miliary tuberculosis	1	1	....	1	....	....	....	....	....	1	1	....	5
Tuberculous meningitis	1	3	1	1	2	....	2	1	2	1	3	1	18
Abdominal tuberculosis	1	1	3	2	2	....	1	....	1	3	....	....	14
Pott's disease	....	....	....	....	....	....	....	....	....	....	1	1	2
Tuberculosis of other organs	....	....	....	2	1	....	1	....	2	....	1	....	7
Disseminated tuberculosis	....	....	....	....	1	1	....	....	1	....	....	....	3
Syphilis	1	....	....	....	....	....	....	1	....	....	1	2	5
Cancer of buccal cavity	2	1	1	3	1	....	....	....	....	1	....	1	10
Cancer of stomach, liver	6	6	9	6	5	9	7	3	8	7	4	6	76
Cancer of peritoneum, intestines, rectum	7	8	3	4	4	3	1	2	3	4	4	4	47
Cancer of female genital organs	2	....	3	4	1	9	5	5	3	....	1	4	37
Cancer of breast	3	1	3	2	1	1	1	....	2	....	1	1	16
Cancer of skin	....	....	....	1	1	....	....	....	....	....	2	1	5
Cancer of other organs	3	5	2	3	3	5	5	4	1	1	1	3	36
Other tumors	....	....	....	....	1	....	....	....	....	1	....	....	2
Acute articular rheumatism	....	1	1	1	....	1	1	2	1	....	....	1	9
Chronic rheumatism and gout	....	....	....	....	....	....	....	....	....	1	....	....	1
Diabetes	3	5	2	2	5	3	5	7	3	8	6	3	52
Exophthalmic goiter	1	....	1	....	2	....	....	1	....	....	....	1	6
Additon's disease	....	....	....	....	....	....	....	....	....	....	1	1	2
Leukemia	....	....	....	....	1	1	....	2	1	....	1	1	7
Anemia chlorosis	2	3	2	....	....	1	....	1	1	3	2	....	15
Other general diseases	....	1	....	1	....	....	1	2	....	....	1	....	6
Alcoholism	....	2	....	....	....	....	....	1	2	....	2	....	7
Other chronic poisoning	....	....	....	....	1	....	....	....	....	....	....	....	1
	60	60	51	51	48	65	50	50	44	60	52	54	645
NERVOUS SYSTEM													
Encephalitis	....	....	1	1	....	....	....	....	....	2	....	1	5
Meningitis:													
Simple	3	3	1	1	1	1	....	1	2	....	....	....	13
Cerebrospinal	1	....	1	....	....	1	2	....	1	....	1	2	9
Locomotor ataxia	....	1	....	....	....	1	1	....	1	....	....	....	4
Other diseases of spinal cord	1	2	1	1	....	1	....	....	1	1	....	2	10
Cerebral hemorrhage	9	16	12	5	13	18	13	10	14	9	19	14	152
Softening of brain	....	....	....	....	....	....	....	....	....	2	1	....	3
Paralysis without specified cause	2	1	1	1	1	3	2	1	....	4	2	3	21
General paralysis of insane	1	....	1	....	....	1	1	....	1	....	....	1	6
Other forms of mental alienat'n	....	1	....	1	....	....	1	1	....	....	1	....	5
Epilepsy	1	1	1	....	....	....	....	....	1	....	1	1	6
Convulsions of infants	....	1	....	....	2	....	1	....	....	1	....	1	6
Neuralgia and neritis	....	....	....	....	....	....	....	....	....	....	....	1	1
Other diseases of nerv. system	1	1	1	....	1	....	2	1	1	....	....	1	9
Diseases of ears	....	....	....	....	....	2	....	1	....	....	....	....	3
	19	27	20	10	18	28	23	15	22	19	25	27	253

CIRCULATORY SYSTEM	Dec., 1914	Jan., 1915	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Total
Pericarditis	....	....	1	1	....	....	1	....	1	....	....	....	4
Acute endocarditis	1	....	....	2	1	....	....	1	1	1	2	....	9
Organic diseases of the heart	27	22	19	20	18	21	21	19	12	16	18	14	227
Angina pectoris	4	3	4	1	2	6	3	....	1	2	1	3	30
Diseases of arteries	2	1	3	2	6	3	4	1	4	4	1	5	36
Embolism and thrombosis	4	3	2	1	1	2	2	3	....	....	....	3	21
Diseases of veins	....	....	....	....	1	....	....	....	....	....	....	1	2
Diseases of lymphatic system	....	....	....	....	1	1	....	....	1	....	....	....	3
Hemorrhage	....	....	2	....	....	....	....	1	....	....	....	....	3
	38	29	31	27	30	33	31	25	20	23	22	26	335
RESPIRATORY SYSTEM													
Diseases of larynx	1	....	....	....	....	....	....	....	....	....	....	....	1
Diseases of thyreoid body	....	1	....	....	....	....	....	....	....	....	1	....	2
Acute bronchitis	....	2	....	....	1	....	2	....	....	1	....	1	7
Chronic bronchitis	1	1	....	1	....	....	2	....	1	....	....	....	6
Broncho pneumonia	10	9	11	2	4	1	....	4	3	2	....	7	53
Lobar pneumonia	18	16	13	14	6	6	11	4	1	7	5	6	107
Pleurisy	....	....	....	....	....	2	....	....	....	....	....	1	3
Pulmonary congestion	1	1	1	1	5	....	....	2	....	....	....	....	11
Gangrene of lung	....	....	1	....	....	....	....	....	....	....	....	....	1
Other diseases of respiratory system	1	1	....	....	....	1	4	....	....	....	2	....	9
	32	31	26	18	16	10	19	10	5	10	8	15	200
DIGESTIVE SYSTEM													
Diseases of mouth and annexa	1	....	1	....	....	....	....	....	....	....	....	....	2
Diseases of pharynx	....	....	....	1	1	....	....	....	....	1	....	....	3
Ulcer of stomach	2	6	2	1	2	2	1	....	1	3	1	1	22
Other diseases of stomach	2	....	....	1	1	2	....	....	2	....	1	3	12
Diarrhea and enteritis (under 2 years)	3	2	2	....	1	1	1	1	1	4	2	....	18
Diarrhea and enteritis (over 2 years)	....	1	1	1	2	....	1	....	2	....	7	2	17
Appendicitis	4	....	2	6	2	3	3	....	5	2	1	....	28
Hernia, intestinal obstruction	2	4	4	4	2	1	....	3	1	3	2	....	26
Other diseases of intestines	....	....	....	....	....	2	....	2	1	1	1	1	8
Cirrhosis of liver	5	2	....	1	1	1	1	2	1	....	2	....	16
Biliary calculi	....	....	....	....	1	1	1	....	2	....	1	....	6
Other diseases of liver	....	....	2	1	1	....	2	1	2	2	....	1	12
Simple peritonitis	1	1	....	2	1	1	....	....	....	....	....	3	9
Other diseases of digestive system	....	....	....	1	....	....	....	1	....	1	....	....	3
	20	16	14	19	15	14	10	10	18	17	18	11	182

GENITO-URINARY SYSTEM	Dec., 1914	Jan., 1915	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Total
Acute nephritis	....	....	....	....	1	....	1	....	1	1	....	1	5
Bright's disease	12	15	12	15	11	11	5	12	20	7	17	9	146
Other diseases of kidneys	2	1	....	....	3	....	....	....	2	3	....	1	12
Calculi urinary passages	....	....	....	....	....	....	1	....	1	....	1	....	3
Diseases of bladder	1	1	....	2	....	....	....	....	....	....	1	....	5
Diseases of prostate	....	1	1	2	1	1	....	....	2	....	....	....	8
Uterine tumor	....	....	....	....	....	....	....	....	1	....	....	....	1
Other diases of uterus	....	....	....	....	....	2	....	1	....	....	....	....	3
Cysts and other tumors	....	....	....	....	....	....	1	....	....	....	....	1	2
Salpingitis	....	....	1	3	....	....	....	1	....	....	....	1	6
	15	18	14	22	16	14	8	14	27	11	19	13	191
THE PUERPERAL STATEM													
Accidents of pregnancy	....	....	....	....	1	....	1	1	....	2	1	....	6
Puerperal hemorrhage	....	....	....	....	1	1	....	....	....	....	....	....	2
Other accidents of labor	....	....	....	....	1	1	....	....	1	2	1	....	6
Puerperal septicemia	1	....	1	1	2	....	....	....	2	1	....	....	8
Puerperal albuminuria	....	....	....	1	....	2	1	....	....	....	....	....	4
Puerperal phlegmasia	1	....	....	1	....	....	....	....	....	....	1	....	3
	2	....	1	3	5	4	2	1	3	5	3	....	29
DISEASES OF SKIN AND CELLULAR TISSUE													
Gangrene	2	1	....	2	2	1	1	....	....	1	1	....	11
Furuncle	....	....	....	....	....	....	....	....	....	2	....	....	2
Acute abscess	....	....	....	....	1	....	....	....	....	....	....	....	1
	2	1	....	2	3	1	1	....	....	3	1	....	14
DISEASES OF BONES AND ORGANS OF LOCOMOTION													
Diseases of bones	....	....	1	....	....	....	2	2	....	....	....	....	5
Diseases of joints	....	....	1	....	....	....	....	....	....	....	....	....	1
Other diseases of organs of locomotion	....	....	....	....	....	....	....	....	1	1	....	....	2
	....	....	2	....	....	....	2	2	1	1	....	....	8
MALFORMATIONS													
Congenital malformations:													
1—Hydrocephalus	....	....	1	1	....	....	....	....	....	....	1	....	3
2—Congenital malformations of heart	2	1	....	....	1	1	1	3	....	1	....	2	12
3—Other congenital malformations	....	....	....	....	1	....	....	....	....	....	....	....	1
	2	1	1	1	2	1	1	3	....	1	1	2	16

EARLY INFANCY	Dec., 1914	Jan., 1915	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Total
Congenital debility:													
1—Premature	1	6	6	4	2	8	8	4	1	4	6	5	55
2—Congenital debility	5	2	1	2	1	4	3	4	5	3	3	2	35
Other causes peculiar to early infancy:													
1—Injuries at birth	....	....	2	....	1	....	1	1	2	1	3	....	11
2—Other causes peculiar to early infancy	2	1	....	3	2	4	2	....	1	1	1	4	21
Lack of care	....	....	....	....	....	....	....	....	....	....	....	....	....
	8	9	9	9	6	16	14	9	9	9	13	11	122
OLD AGE													
Senility	10	8	8	6	8	3	8	6	3	5	3	6	74
	10	8	8	6	8	3	8	6	3	5	3	6	74
ILL-DEFINED DISEASES													
Ill-defined organic diseases	1	....	....	....	....	....	....	....	....	....	....	....	1
	1	....	....	....	....	....	....	....	....	....	....	....	1
EXTERNAL CAUSES													
Suicide by poison	3	2	2	3	4	1	2	1	2	....	....	2	22
Suicide by asphyxia	....	....	1	....	....	1	....	....	1	....	1	1	5
Suicide by hanging	....	....	....	2	....	....	....	....	2	1	2	....	7
Suicide by drowning	....	....	1	....	1	1	....	....	....	....	....	....	3
Suicide by firearms	2	....	....	....	1	2	3	1	1	2	3	3	18
Suicide by cutting	....	....	....	1	....	2	....	....	....	....	....	....	3
Suicide by jumping	1	....	1	....	1	....	....	....	....	....	....	....	3
Poisoning by food	....	....	....	....	....	....	....	....	....	....	....	1	1
Other acute poisoning	....	1	....	....	....	....	....	....	....	....	1	....	2
Burns	1	1	....	....	1	2	....	2	1	2	....	....	10
Absorption of deleterious gases	1	2	....	....	....	....	....	....	....	1	....	....	4
Accidental drowning	....	1	1	1	5	....	5	5	9	2	1	1	31
Accidental firearms	....	2	....	....	1	....	....	....	....	....	....	1	4
Accidental fall	2	8	4	2	1	1	2	4	5	6	3	3	41
Accident by machines	....	....	1	1	1	3	....	....	1	....	....	....	7
Accidental other crushing	3	2	2	....	....	....	3	2	....	....	1	....	13
Accidental, railroad	....	....	2	....	....	1	1	1	....	1	1	....	7
Accidental, street car	....	....	....	1	....	....	....	....	....	1	....	1	3
Accidental, automobile	2	....	....	....	....	7	1	1	1	....	3	3	18
Accidental, motorcycle	....	....	....	....	....	....	....	....	....	2	....	....	2
Electricity	....	....	....	....	....	....	1	....	....	....	....	....	1
Homicide by firearms	1	2	....	....	....	....	....	....	....	1	1	....	5
Homicide by other means	....	....	1	1	....	....	1	....	....	....	....	1	4
Other external violence	....	....	....	....	....	....	2	....	....	....	1	....	3
	16	21	16	12	16	21	21	17	23	19	18	17	217

MUNICIPAL COURT FOR YEAR 1915

Report to the Mayor of the City of Portland, Oregon, from the Department of Public Safety, Bureau of the Municipal Court, for the fiscal year ending November 30, 1915:

ACTIONS

Number of complaints filed	9,666
Number of warrants issued	9,662
Number of cases tried	15,048

MAINTENANCE

	Total Appropriation.	Total Incumbrance.	Total Balance.
Personal service	$7,608.00	$6,696.50	$911.50
Supplies	185.00	178.15	6.85
Equipment	140.00	125.58	14.42
Janitorial service	24.00	24.00	.....
Oregon Humane Society	175.00	175.00	.....
Totals	$8,132.00	$7,199.23	$932.77

RECEIPTS

Fines collected	$26,101.70
Forfeitures	1,739.00
Costs	244.50
Total	$28,085.20

Respectfully submitted,

N. D. BEUTGEN,

Clerk of the Municipal Court.

HARBOR PATROL FOR YEAR 1915

Portland, Oregon, January 1, 1916.

Hon. H. R. Albee, Mayor, Portland, Oregon.

Dear Sir: I have the honor to submit herewith my report for the year 1915.

All ordinances governing the harbor of the City of Portland have been enforced whenever and wherever practicable. Incoming vessels have been boarded, their masters informed as to harbor regulations and a watch kept over same to see that these regulations were enforced. Particular attention has been given to the ordinance governing the placing of safety nets beneath the gangways of all ships, and I am pleased to state that we have not had one accident during the past year. Prior to the strict enforcement of this ordinance, from five to six persons met their death by falling from poorly equipped gangways.

Seven calls were received for the use of the lung motor, but owing to the length of time the patients were in the water it was impossible for any chance of resuscitation.

Thirty-nine people were drowned and their bodies brought to the patrol boat station, where they were turned over to the Coroner.

Forty-three snags, all of which were a menace to navigation, were removed from the river.

The patrol boat responded to 38 fire alarms on the river front.

Particular attention has been given to the keeping clear of the channel and not allowing refuse to be deposited on the banks of the river where high water would cause the same to be carried into the channel, thereby causing unnecessary shoaling.

Incoming and outgoing passenger steamers were met at the docks by officers of this Bureau, and the traveling public given assistance and information whenever required. Supervision was kept over the drivers of hotel runners, express wagons and taxicabs when meeting the incoming vessels.

The patrol boat made 755 trips and traveled 4,826 miles, and 127 items of assistance were rendered during the year. A daily inspection of the harbor has been maintained and a patrol of the same (both by night and day) by officers of this Bureau has been made. On the 13th day of July, 1915, Albert Toothill, who was intoxicated, was pulled from the river, at the foot of Alder Street, by Harbor Patrolman Tilton and Engineer Jaeckel of the patrol boat. On the 14th day of August, 1915, two small boys, who were thrown in the river by the capsizing of their boat, were picked up by the patrol boat.

Unclaimed articles recovered from the river, after being advertised in the daily newspapers, were sold at public auction and the money turned over to the City Treasurer. Cargo and other material lost overboard from ships were recovered by the City Grappler and returned to the owners. The sum of $131.75 has been taken in by this Bureau and turned over to the City Treasurer. The commander of the British Prison Ship "Success" sent $20.00 to this office, which amount also has been turned over to the City Treasurer. This Bureau has furnished 1,105,573 gallons of Bull Run water to vessels making this port and the money collected for same has been turned over to the Water Bureau.

Strict watch has been kept to prohibit the storing, on the docks, of dynamite, gunpowder and other explosives.

FIRE BOAT CALLS RESPONDED TO BY PATROL BOAT

Date.	Time.	Place.
12- 1-14...	1:30 A. M. to 1:45 A. M.	Taylor Street
12- 1-14...	6:00 A. M. to 6:56 A. M.	Portland Ship Yards
12- 7-14...	9:00 P. M. to 9:45 P. M.	Launch Eola, Ft. Belmont Street
12-13-14...	8:10 P. M. to 8:20 P. M.	Alder Street
12-19-14...	7:15 A. M. to 7:45 A. M.	Mersey Dock
12-20-14...	9:00 P. M. to 11:15 P. M.	Jones Mill
1- 9-15...	8:30 P. M. to 8:45 P. M.	Portland Lumber Co.
1-17-15...	7:45 P. M. to 7:50 P. M.	Couch Street
2- 8-15...	4:05 P. M. to 4:30 P. M.	Albina Ferry Mason
2-23-15...	11:45 P. M. to 12:05 P. M.	Alder Street
3- 8-15...	3:30 A. M. to 3:45 A. M.	Foot of Salmon Street
3- 8-15...	7:00 P. M. to 7:35 P. M.	Foot of Wilson Street
3- 8-15...	10:30 P. M. to 1:30 P. M.	Jones Cash Store. Ft. Oak Street
3-12-15...	7:20 P. M. to 7:45 P. M.	Foot of Ankeny Street
4-17-15...	7:15 A. M. to 8:00 A. M.	Foot of Couch Street
4-25-15...	4:50 A. M. to 6:00 A. M.	Albers Bros. Milling Co.
4-26-15...	4:00 P. M. to 4:25 P. M.	Foot of Northrup Street
4-27-15...	3:40 P. M. to 4:10 P. M.	West approach Hawthorne Bridge
5-21-15...	8:20 A. M. to 8:40 A. M.	Foot of Salmon Street
5-22-15...	10:20 A. M. to 10:40 A. M.	Foot of Washington Street
5-24-15...	10:40 A. M. to 10:55 A. M.	Foot of Taylor Street
5-25-15...	2:30 A. M. to 4:00 A. M.	Enterprise Planing Mill, Foot of Yamhill Street
6- 9-15...	1:00 A. M. to 4:00 A. M.	Standard Box Co.
7- 4-15...	12:30 A. M. to 12:45 A. M.	Foot of Pine Street
7-11-15...	7:30 P. M. to 7:55 P. M.	Foot of Main Street
7-19-15...	7:50 P. M. to 8:45 P. M.	N. P. Mill
7-20-15...	1:45 A. M. to 1:55 A. M.	Foot of Hawthorne Avenue
8-13-15...	12:30 P. M. to 1:50 P. M.	Fish Ville
9-13-15...	1:05 P. M. to 1:25 P. M.	Portland Ship Yards
9-11-15...	5:30 P. M. to 5:45 P. M.	Foot of Couch Street
9-11-15...	7:20 P. M. to 7:45 P. M.	Foot of Taylor Street
9-25-15...	7:50 P. M. to 9:20 P. M.	Foot of Ellsworth Street
10- 1-15...	2:30 A. M. to 3:30 A. M.	Willamette Moorings
10-11-15...	4:45 A. M. to 5:25 A. M.	Foot of Spokane Avenue
10-11-15...	2:25 P. M. to 4:45 P. M.	O. Y. C.
11- 2-15...	5:10 A. M. to 5:30 A. M.	East Morrison Street
11-11-15...	7:00 P. M. to 7:20 P. M.	Foot of Alder Street
11-12-15...	11:55 P. M. to 12:45 A. M.	P. M. B. C.

LUNG MOTOR CALLS

Date.	Plate.	Used or Not.	Subjects.
12- 5-14 ...	O. C. Dock	No	Boys buried in sand
6-14-15 ...	Jennings Lodge	No	Will Schaeffer
7-19-15 ...	Ross Island	No	Ray Nevelle
8- 6-15 ...	Golf Links	Yes	John Haas
8- 8-15 ...	Guttons Slough	Yes	Glenn Pattillo
8-30-15 ...	Quarters	Yes	Alvin Hawkins
10-18-15 ...	Western Cooperage Co.	No	Mr. Dunsdalle

SNAGS REMOVED

Date.		
1-21-15	O-W. R. & N. Dock	To Quarters
1-26-15	O-W. R. & N. Dock	N. P. Mill
2- 9-15	Ferry Mason	Victoria Dolphins
2-12-15	Stark Street	N. P. Mill
2-16-15	I. P. Mill	N. P. Mill
2-25-15	Victoria Dolphins	N. P. Mill
2-25-15	Columbia No. 1	N. P. Mill
2-27-15	O-W. R. & N. Dock	Steamer Pronto
3-30-15	Burnside Bridge	Quarters
4- 9-15	Ferry Mason	N. P. Mill
4-20-15	Foot of Hamilton Avenue	North End of Ross Island
4-20-15	Jones Mill	North End of Ross Island
4-21-15	Jones Mill	North End of Ross Island
4-22-15	Ferry Mason	N. P. Mill
4-23-15	Cruiser Boston	Victoria Dolphins
5- 7-15	Municipal No. 1	N. P. Mill
5- 8-15	Broadway Bridge	Albers Dock
5- 7-15	Stark Street	Victoria Dolphins
5-18-15	Portland Flour Mills	N. P. Mill
7-15-15	Rowing Club	P. of P. Boat House
7-19-15	Oak Street	N. P. Mill
7-19-15	Swan Island	Willbridge Dock
7-19-15	Swan Island	Willbridge Dock
7-23-15	Oak Street	N. P. Mill
7-24-15	S. P. & S. Bridge	P. of P. Dry Dock
7-28-15	Hardtack Island	P. of P. Boat House
8- 3-15	Hardtack Island	N. P. Mill
8- 3-15	Swan Island	P. of P. Dry Dock
8- 3-15	Swan Island	N. P. Mill
8- 4-15	Portland Ship Yards	P. of P. Boat House
8- 4-15	Hardtack Island	P. of P. Boat House
8- 4-15	Stark Street	P. of P. Boat House
8- 6-15	Swan Island	P. of P. Dry Dock
8-10-15	Willamette Moorings	P. of P. Boat House
8-22-15	Standard Oil Dock	P. of P. Dry Dock
9- 1-15	Swan Island	P. of P. Dry Dock
9-10-15	Swan Island	P. of P. Dry Dock
10- 8-15	P. M. B. C.	P. of P. Boat House
10-16-15	Albina Dock	Steamer McCracken
10-21-15	Government Moorings	P. of P. Dry Dock
11- 8-15	Portland Flour Mills	P. of P. Launch Marie
11-15-15	Powder Dock	P. of P. Dry Dock
11-26-15	Swan Island	N. P. Mill

Total 43

DROWNINGS AND BODIES

Date.	Name of Person.	Drowning or Recovery.	Date Recovery.	By.
2-17-15	Emma Buhre	Foot of Hamilton Avenue	2-18-15	Brady
3- 2-15	John Donavan	Montgomery No. 2	3- 4-15	Brady
4- 8-15	Unidentified man	I. P. Mill	Floater	Boat
4-10-15	Bertrand Reed	Mocks Bottom	4-11-15	Brady
4-15-15	Wm. Ernst	Fort of Portland Dry Dock	Floater	Boat
4-18-15	Ole Thompson	Portland Lumber Co.	Floater	Boat
4-21-15	Unidentified man	McKenzie Boat House	Floater	Boat
4-25-15	Chas. Eaupre	Foot of Hamilton Avenue	4-26-15	Brady
4-28-15	Mr. Erickson	Burnside Bridge	4-30-15	Brady
5-19-15	Eddie McNew	Mt. Tabor Reservoir	5-19-15	Brady
6- 1-15	Mrs. Martin	Back of Swan Island	6- 1-15	Brady
6- 1-15	Doris Shannon	Back of Swan Island	6- 2-15	Brady
6- 1-15	Amos Weise	Back of Swan Island	6- 2-15	Brady
6- 1-15	Clyde Davidson	Back of Swan Island	6- 2-15	Brady
6-14-15	Will Schaeffer	Jennings Lodge		
6-15-15	Miss Dickey	Favorite Boat House	Floater	Boat
6-17-15	Arthur Finn	Off from Linnton	6-23-15	Coroner
6-24-15	James Stevenson	Oaks	Floater	Boat
6-27-15	Two-year-old boy	Hayden Island		
6-28-15	Unidentified man	Foot of Washington Street	Floater	Boat
6-29-15	Unidentified man	Fire Boat Williams	Floater	Boat
7- 2-15	Frank Maley	S. S. Beaver, Crown Mills	7- 2-15	Brady
7- 5-15	Mr. Kuhn	Oregon Slough	7-11-15	Boat
7- 5-15	Unidentified man	Rock Island	7- 6-15	Coroner
7-19-15	Ray Nevelle	Above P. M. B. C.	7-19-15	Brady
7-19-15	Albert Foster	Vancouver Ferry	7-19-15	Others
7-20-15	Godfried Olson	Bridgeton	7-21-15	Others
8- 6-15	John Haas	Waverley Club	8- 6-J	Brady
8- 8-15	Glenn Pattello	Guttons Slough	8- 8-15	Others
8- 9-15	Peter Georgesen	Montgomery No. 1	Floater	Boat
8- 9-15	Chas. Ritter	Foot of Salmon Street	8-10-15	Brady
8-14-15	Unidentified man	Foot of Curry Street	8-15-15	Brady
8-20-15	Unidentified man	University Shingle Mill	Floater	Boat
8-20-15	Mrs. Rehbine	Below Flour Mills	8-20-15	Clarence
8-20-15	Harry Dixon	E. & W. Mill	8-21-15	Brady
8-30-15	Walter Nelson	O-W. R. & N. Dock	8-30-15	Brady
8-30-15	Alvin Hawkins	O-W. R. & N. Dock	8-30-15	Brady
9- 7-15	Price	Globe Mills	9-11-15	Floater
11-12-15	Ed Swanson	West End Broadway Bridge	Floater	Floater Boat

ASSISTANCE RENDERED

Date.	To Whom Rendered.	Nature of Assistance
6-15-15..	Mr. Generrah	Towed scow from Boston to moorings
6-17-15..	Willamette Iron Works	Ordered Strs. to slow down
6-20-15..	Miss Grace Henderson	Camera Recovered
6-30-15..	Von de Werth	Boys driven away
6-30-15..	Detective Department	Put Dect. Craddock ab'rd S.S. Colon
6-30-15..	Mr. Beech	Investigated scow at Powder Dock
7- 7-15..	Multnomah Box Co.	Ordered dredge out of channel
7-13-15..	Albert Toothill	Hauled from River at Ft. of Alder St.
7-13-15..	Portland Flour Mills	Put out fire under their dock
7-17-15..	L. V. Woodard	Boys not paying for use of Baths
7-18-15..	General Public	Log raft moved from channel
7-22-15..	General Public	Ord. small launch to get proper lights
7-24-15..	N. B. Dock	Had stolen float returned
7-24-15..	Captain Groves	Note taken to Str. Pronto
7-25-15..	U. S. S. Albany	Helped move
7-25-15..	Police Department	Officers put on Swan Island
7-26-15..	Police Department	Officers put on Swan Island
8-2-15...	Woman	Found two boys in launch Minerva—had been out all night
8- 4-15..	Launch Beliner	Towed to P. M. B. C.
8- 5-15..	Multnomah Box Co.	Ordered dredge moved out of channel
8- 6-15..	L. V. Woodard	Recovered bathing suits
8- 9-15..	U. S. S. Albany	Helped moor—brought sick man to quarters
8-11-15..	Fire Boat Campbell	Log raft moved from front of berth
8-12-15..	Launch Annie	Towed to quarters—engine trouble
8-12-15..	Mr. Moore	Investigated robbery at his houseboat
8-14-15..	Multnomah Club	Attended Marathon swim
8-14-15..	Merrill's Boat House	Boat turned over with two boys at Portland Lumber Co.
8-14-15..	Two swimmers	Hauled from water exhausted
8-15-15..	U. S. S. Albany	Turned her around
8-16-15..	Dock Commission	Towed skiff from Dock No. 2 to No. 3
8-15-15..	Detective Department	Goods recovered at H. Hansen's
8-16-15..	Detective Department	Goods recovered at H. Hansen's
8-19-15..	Detective Department	Goods recovered at H. Hansen's
8-20-15..	Irving Dock	Ordered fire put out at S end of dock
8-24-15..	Launch	Towed in
8-24-15..	Launch La Frida	Stuck in mud on Ross Island—towed to P. M. B. C.
8-26-15..	S. S. Highbary	Turned around
8-26-15..	Mr. Moore	Ordered swimmers off his boathouse
8-27-15..	City of Portland	Inspection of swimming sites
8-28-15..	Mr. McClure	Canoe from Lanberson & Reids on search warrant
9- 4-15..	Associated Oil Co.	Had P. of P. move barge from dock
9- 7-15..	Detective Department	Went to Willm. Moorings for woman
9-11-15..	Alixis Contract Co.	Investigated line from N. & K. barge to their dolphin
9-14-15..	Drunk	Asleep on pile driver—sent to station
9-14-15..	Chief Clark	Investigated piling driven in beach near hog ranch
9-15-15 to 9-22-15 ..	Police Department	Went to St. Johns ferry—took officers across river
9-15-15..	Lieut. Smith, U. S. N.	Inspection of harbor
9-19-15..	Mr. Bain	Towed canoe to Lamberson & Reids
9-19-15..	Launch Minnie	Towed to quarters
9-21-15..	Mr. Hegardt	Inspection of harbor
9-22-15..	Capt. of Fr. Bk. Dupliex	Arrested drunken sailor he could not handle
9-25-15..	Fire Department	Used our Babcock in houseboat fire
10- 2-15..	Dock Commission	Towed float up from below Fl. Mills
10- 4-15..	Disabled Launch	Towed to quarters
10- 7-15..	Fire Mshl & Dist. Atty.	Investigated boathouse fire
10- 7-15..	Morrison Bridge	Picked up their float—towed to them
10- 8-15..	Str. La Center	Towed horse from Wash. St. to Oak

ASSISTANCE RENDERED—Continued

Date.	To Whom Rendered.	Nature of Assistance
10-11-15..	Dr. Ross	Towed burning houseboat to fireboat
10-14-15..	Fire Marshal	Investigated houseboat fire.
10-17-15..	Dep. Sheriff Col. County	Went to Willamette Slough — looked for stolen launch
10-26-15..	S. S. Tampeco	Took soundings off Flour Mills
10-26-15..	Mr. Sherrill of Blue Taxi Co.	Took him to Str. Klamath to collect his fare
10-27-15..	Man	Helped tow 3 houseboats
11- 2-15..	Fr. Ship Andre Theodore	Helped move ballast logs
11- 5-15..	Jap. S.S. Hokoku Maru	Shoved away from dock
11- 9-15..	Dock Commission	Took Mr. Neuman on insp. of harbor
11-13-15..	Fire Marshal	Investigated boathouse fire
11-13-15..	Mrs. L. G. Baldwin	Taken to U. S. S. Boston
11-15-15..	Fr. Ship Andre Theodore	Helped move in channel and get out anchor
11-15-15..	Detective Department	Dect. taken to U. S. E. Dr. Chinook
11-17-15..	Mrs. Merrill	Looked for her son Dewey
11-18-15..	Standard Boathouse	Helped get float back and tied up
11-20-15..	Capt. J. A. Roberts	Patroled lower harbor for ballast logs
11-21-15..	Cash Wier	Barge Squaw caught adrift—tied up
11-24-15..	Chf. Stew'rd SS Yucatan	Third cook arrested
11-26-15..	W. Gunderson	F. Klender ordered to let him have his logs and get them in river
11-26-15..	Detective Department	Taken on inspection of upper harbor
11-27-15..	City Eng. Bureau	Photographer taken to powder dock

SNAGS REMOVED

11-15-15—Powder Dock to Port of Portland Drydock.
11-26-15—Swan Island to N. P. Mill.

FIRE BOAT CALLS

11-17-15—Foot of Main Street, 6:05 P. M. to 6:15 P. M.

BODIES

11-19-15—John Linnd, found in trunk at foot of Flanders Street.

MISCELLANEOUS

11-23-15—More lines ordered made fast to log rafts, scows and houseboats in upper harbor.
11-23-15—Had U. S. E. Str. Matholma make one of the old drydock wings fast at S. P. & S. Bridge, as it had broken loose.

ARTICLES RECOVERED

11-15-15—H. Oleen's Launch found under O. & W. Dock.

ARTICLES RECOVERED

Date	Found By	Articles Found
12-18-15....	Launch Olympic	Launch Doc Yak
4 -1 -15....	Floating past quarters	Rowboat
4 -11-15....	Harry Ollinger	Rowboat
5 -3 -15....	Patrol Boat	Rowboat Swallow
5 -8 -15....	Patrol Boat	Rowboat stolen from C. Gruely
6 -29-15....	Patrol Boat	Rowboat stolen from Geo. Petterson
7 -10-15....	Patrol Boat	Canoe at Ankeny Street
7 -14-15....	Patrol Boat	Canoe F 4 under Municipal No. 1
7 -28-15....	Patrol Boat	Canoe
8 -1 -15....	Patrol Boat	Canoe of Levi Moyer
8 -4 -15....	Patrol Boat	Merrill's Boat No. 28
8 -9 -15....	Patrol Boat	Lifeboat off Wallula
8 -19-15....	Patrol Boat	Launch Mariuch
8 -23-15....	Officer Hansen	Rowboat B. Baldwin
8 -26-15....	Frank Racy	Launch recovered
9 -6 -15....	Patrol Boat	Rowboat
9 -17-15....	Patrol Boat	Rowboat
9 -17-15....	Patrol Boat	Rowboat
9 -27-15....	Patrol Boat	Launch Jeff
10-8 -15....	Patrol Boat	Canoe
10-25-15....	Patrol Boat	Dock Fender Float
11-6 -15....	Mitchell's Boathouse	Rowboat
11-12-15....	Patrol Boat	Green houseboat

MISCELLANEOUS

2 -12-15.. Oil coming from under E. & W. Mill
2 -14-15.. Boys caught stealing walnuts at Ainsworth Dock
2 -17-15.. Woman's clothes found on houseboat in South Portland
4 -9 -15.. Trash dumping at Am. Bk. Berlin at American Canning Co.
4 -10-15.. S. S. Geo. W. Elder pumping oil in river
4 -13-15.. Oil coming from Brooklyn sewer
4 -15-15.. Man sweeping trash in the river at Albers' Dock
7 -30-15.. Looked for snag hit by Launch Constitution
7 -31-15.. Swept channel for snag off Portland Ship Yards
8 -11-15.. Launch Gracie; more passengers than life preservers
8 -17-15.. Mrs. Lavey, 961 Kerby, found in dazed condition at O. Y. C.
8 -22-15.. R. Hart brought to quarters with dislocated shoulder
8 -24-15.. Jas. J. Green, operating launch while drunk
8 -29-15.. Investigated brush fire below Portland Flour Mills
8 -29-15.. No light in boat off French Bark La Pilier at 9:20 P. M.
9 -9 -15.. Alixis Cont. Co. notified about dumping dirt near water edge
9 -19-15.. Barby Fish Co. ordered to move barge and clean up under dock
10-4 -15.. Sand falling in river from Col. Con. Digger, ordered stopped
10-15-15.. S. Schooner Daisy Freeman ordered to fix net under gangway
10-19-15.. Swept channel off Swan Island for snag
10-20-15.. Swept channel off Swan Island for snag with Pilot Smith
11-4 -15.. S. S. Rose City dumping sweepings in river
11-5 -15.. Chute at E. & W. Mill was spilling sawdust in river
11-10-15.. S. S. J. A. Chancellor ordered to place net under gangway
11-23-15.. Notified plants on river to put out extra moorings on account of expected current and gale
11-23-15.. Found portion of wrecked pontoon of P. of P. Drydock adrift in river—assistance of Str. Mathloma made same fast above P. Drydock

RUNNING TIME AND MILES PER HOUR

Date	Miles Covered by Boat	Hours Engine Was Turning Over
December, 1914....	176 miles—43 trips	48 hours, 45 minutes
January, 1915....	233 miles—47 trips	55 hours, 10 minutes
February, 1915....	253 miles—52 trips	63 hours, 40 minutes
March, 1915....	299 miles—64 trips	68 hours, 45 minutes
April, 1915....	408 miles—65 trips	74 hours, 40 minutes
May, 1915....	295 miles—63 trips	57 hours, 35 minutes
June, 1915....	473 miles—78 trips	86 hours, 25 minutes
July, 1915....	603 miles—85 trips	100 hours, 45 minutes
August, 1915....	731 miles—97 trips	120 hours, 25 minutes
September, 1915....	427 miles—56 trips	75 hours, 40 minutes
October, 1915....	436 miles—46 trips	66 hours, 45 minutes
November, 1915....	430 miles—50 trips	65 hours, 50 minutes

OILS FOR 1915

Date	Kind	Amount	Date	Kind	Amount
12-11-14..	Distillate	50 Gallons	8 -11-15..	Gasoline	50 Gallons
12-26-14..	Distillate	150 Gallons	8 -15..	Distillate	35 Gallons
1 -25-15..	Gasoline	60 Gallons	8 -26-15..	Distillate	50 Gallons
1 -28-15..	Gasoline	50 Gallons	8 -30-15..	Distillate	25 Gallons
1 -28-15..	Valvoline	52 Gallons	9 -4 -15..	Distillate	130 Gallons
1 -29-15..	Distillate	100 Gallons	9 -6 -15..	Distillate	145 Gallons
3 -22-15..	Gasoline	50 Gallons	9 -10-15..	Distillate	20 Gallons
4 -28-15..	Distillate	200 Gallons	9 -30-15..	Distillate	35 Gallons
6 - 3-15..	Gasoline	100 Gallons	10-9 -15..	Distillate	100 Gallons
6 -10-15..	Distillate	100 Gallons	10-13-15..	Distillate	75 Gallons
6 -22-15..	Valvoline	52 Gallons	10-14-15..	Distillate	25 Gallons
7 -3 -15..	Distillate	200 Gallons	10-14-15..	Gasoline	10 Gallons
7 -21-15..	Distillate	100 Gallons	11-11-15..	Distillate	100 Gallons
7 -28-15..	Distillate	200 Gallons	11-11-15..	Gasoline	10 Gallons
8 -3 -15..	Distillate	100 Gallons	11-12-15..	Distillate	100 Gallons
8 -5 -15..	Distillate	125 Gallons			

TOTALS

2270 Gallons of Distillate
310 Gallons of Gasoline
52 Gallons of Valvoline Lubricating Oil
5 Gallons of Zeroline Lubricating Oil
5 Gallons of Motoreze Lubricating Oil
5 Gallons of Havoline Lubricating Oil

Respectfully,

J. SPEIER,
Harbor Master.

ANNUAL REPORT

OF

THE CIVIL SERVICE BOARD

FOR THE FISCAL YEAR ENDING
NOVEMBER 30, 1915

CIVIL SERVICE BOARD FOR YEAR 1915

Portland, Oregon, December 31, 1915.

To the Honorable Mayor and Commissioners of the City of Portland.

Gentlemen:

PRINCIPLES OF THE SERVICE

The true principle of civil service is the securing of competent help for the City's work and getting a dollar's return for the dollar spent by the application of tests which, when satisfactory, will secure efficient service from the appointee. Having accomplished this the appointee is secured in the service and defended against every change in administration or politics but not against personal acts which are detrimental to good service. Merit and that alone secures him a place on the eligible list and superior ability is the basis for promotion. The employe should be as anxious and willing that the system succeed as the Board, and harmony in action is the true basis for success.

The Board is an independent co-operating body whose every effort is to assist the city officials and the body politic in matters relating to city employment.

CHARTER PROVISIONS

While the people passed one desirable amendment to the Charter last June, which now allows the employe protection as to his seniority in service, it is found that there are several changes which should be made. A method should be added which would care for the employe who has faithfully served the City for a number of years and who by reason of age has become incapacitated.

SERVICES OF THE BOARD

The labors of the members of the Board have been arduous owing to the large amount of work which they have reviewed, but they feel that while the work has taken a great deal of their time that there has been constructive progression in the application of and the working out of civil service principles during the past year.

RULES

In the application of rules it has been observed that times have changed conditions and that the rules which have been in effect for some time are being revised to meet progressive ideas of true civil service. With this end in view the present rules are being carefully revised so as to better meet changed conditions and also to provide, as far as possible, for future development.

EXAMINATIONS

The Board has aimed to provide a better class of employes for the City service. Examinations have been carefully graded and prerequisites added. Oral tests have been added to every examination and have proven to be of inestimable value. Many undesirable applicants have been rejected through the application of this test who otherwise might have secured a passing grade. No effort has been spared to make the examinations as applicable as possible to the requirements, from every standpoint, of the position for which the applicant has filed. Practical tests, wherever possible, are given and

the scope of the examination is carefully considered. Experience has shown that these efforts have been rewarded by a much more desirable class of applicants and a better eligible list. As progress has been made toward a higher standardization of examinations and the opportunities of bettering a condition, however good it may seem for the present, always exists, therefore, it has not been deemed best to publish a hard and fast rule for scopes, as was formerly done. Our reports and exchanges with other civil service boards show a marked difference in methods of examination and we trust to be found in the van of progress, unhampered to adopt any efficient and progressive idea which may be presented.

EFFICIENCY RECORDS

In May the Board asked the Council to abolish the efficiency system installed in 1913—it being cumbersome and not constructed so as to secure results. Action we are pleased to say has been taken and the former system replaced by a simple method of merit and demerit, the burden of marking same being placed with the Civil Service Board. This method we feel will work out for the best interests of all concerned, as it will provide for an impartial disposition of complaints and provide for a record of merits—the value of which will be known to the Board and, therefore, they will be better able to use such information in the promotion examinations. And further it is expected that this system will encourage the employe to use his best efforts for efficient and faithful performance of duty.

HEARINGS

A number of hearings have been disposed of during the year and in cases of discharge the appointing authority's order has been upheld with one exception, in which case the punishment fixed by the head of the Bureau was considered to be very severe. The Board has taken the stand that findings of discharge can only be properly judged by the evidence presented before it, and, therefore, while strongly endeavoring to make decisions which are for the best interests of the service, it must be governed by the facts presented at the hearings for its consideration.

PHYSICAL EXAMINATIONS

The Board feels that the physical condition of eligibles should have more attention, as particularly in the Fire and Police Departments it is necessary to provide strong, healthy eligibles, who will not too soon become a charge on the pension funds. They have changed some restrictions on age limit in these departments and consider that it is for the best interests of the city that physical condition should be part of the scope of examinations wherever possible.

CLASSIFICATIONS

At the request of the Civil Service Board, the heads of departments have appointed a committee, who, with the Secretary of the Board, are preparing a revision of the classification of the places and employments in the city's service. The committee have about completed their labors and have endeavored to present a scope which will simplify the examination requirements and provide for a simpler method of promotion.

TEMPORARY APPOINTMENTS

The Board feels that the appointing authorities now realize the

necessity of the use rather than the abuse of this privilege in the Charter and that the percentage of temporary appointments about which any question could be raised is ample evidence that this matter is receiving the careful attention and co-operation which is desired. We hope during the present fiscal year that we will have an absolutely clean record in this respect.

SPECIAL EXAMINERS

The Board takes this opportunity to publicly extend their sincere thanks to the many public spirited citizens of the City of Portland, who have spared neither time nor effort in the making up, judging and marking of the various examination papers submitted to them during the year. These gentlemen have been guided in their duties by a high sense of honor, and the care and effort they have exercised has been plainly apparent.

SERVICE IN DEPARTMENTS

The Board feels that the efficiency of Departments has been impaired by the system which has heretofore been in effect, of allowing an employe the privilege of claiming general priority of service. There is no Charter provision to this effect. The rights imposed upon the Board in the Charter to make rules and regulations for the purpose of carrying out its Civil Service provisions clearly put it within their province to rule that an employe's right of seniority is within the department into which he takes appointment. When an employe is laid off in a department his rights are preserved by his being placed at the head of the eligible list in the class, rank and grade of his standing when laid off, and is eligible for the first vacancy in such class, rank and grade occurring in any department, but from no standpoint is it within reason that he has any claim on the position of any other employe of the same class, rank and grade in any department. This plan will work out for better efficiency as a whole and the preservation of the employe's rights in the position he holds by right of appointment under examination as provided by the Charter.

In conclusion the Board is always ready and anxious to be advised of anything for the good of the service and welcomes information whereby the general good and welfare may be improved and trusts that not only the civil service employe but also the taxpayer and interested citizen of the City will take advantage of the opportunity to present their views, all of which will have careful consideration.

Respectfully submitted,

Civil Service Board.

GEO. W. CALDWELL,
Chairman.

H. W. MACLEAN,
Secretary.

NUMBER OF EMPLOYES UNDER CLASSIFIED CIVIL SERVICE

DEPARTMENT OF PUBLIC SAFETY

Police Bureau

Captain	4
Lieutenant of Police	1
Detective	23
Sergeant of Police	15
Patrolman	225
Detective Sergeant	6
Superintendent Women's Protective Division	1
Assistant Women's Protective Division	1
Matron	3
Stenographer	1
License Inspector	1
Harbor Master	1
Engineer Harbor Patrol	3
City Grappler	1
Engineer City Jail	3
Janitor	3
Elevatorman	2
Municipal Court Clerk	2
	296

Pound Department

Pound Master	1
Deputy	2
	3

Fire Bureau

Chief Engineer	1
1st Assistant Engineer	1
2nd Assistant Engineer	1
Battalion Chief	2
Chief Clerk	1
Clerk	2
Stenographer	1
Fire Escape Inspector	1
Auto Mechanician	1
Relief Engineer	3
Superintendent Fire Alarm Telegraph	1
Chief Operator	1
Operators	6
Lineman	4
Municipal Shop Master Mechanic	1
Supply Driver	1
Hydrantman	2
Machinist	1
Blacksmith	1
Instrumentmaker	1
Plumber	1
Fireboat Captain	2
Lieutenant	2
Master	2
Pilot	2
First Engineer	2
Second Engineer	2
Third Engineer	2
Assistant Engineer (Stoker)	6
Captain Fire Engine	34
Lieutenant Engine Company	42
Fire Engine Engineer	21
Stoker	23
Hoseman	250
	424

PUBLIC UTILITIES

Street Cleaning Bureau

Superintendent	1
Chief Clerk	1
Stenographer	1
Chauffeur	3
Blacksmith	1
Hostler	10
Broommaker	2
Repairman	3
District Superintendent	3
Laborer	203

Water Bureau

Superintendent	1
Assistant Superintendent	1
Chief Clerk	1
Clerk	27
Cashier	1
Assistant Cashier	1
Stenographer	1
Draftsman	5
Computer	1
Engineer	1
Plant Engineer	1
Gateman	10
Pump Engineer	10
Inspector	30
Instrumentman	1
Chainman	5
Chauffeur	2
Carpenter	3
Laborer	260
	358

Incinerator

General Foreman	1
Assistant Foreman	1
Chief Engineer	1
Weighman	1
Topman	3
Fireman	3
Dumpman	2
Watchman	1
Teamster	1
Yardman	1
Laborer	4
	19

BUREAU OF FINANCE

Treasurer

Cashier	1
Clerk	7
Stenographer	3
	11

Public Markets

Market Master	1
Assistant Market Master	1
	2

Municipal Shops

Shop Clerk	1
Auto Mechanic	3
Blacksmith	1
Horseshoer	1
Blacksmith Helper	1
	7

Garage

Auto Mechanic	1
Laborer	1
	2

Purchases and Stores

Chief Clerk	1
Stenographer	1
Stationery Clerk	1
Material Inspector	1
Bill Clerk	1
Messenger	2
	7

PUBLIC WORKS DEPARTMENT

Commissioner's Office

Private Secretary	1
Stenographer	2
Clerk	1
Chauffeur	1
Office Boy	1
	6

Main Office

Chief Clerk	1
Clerk	10
Plan Clerk	1
Desk Clerk	1
Stenographer	3
	16

Bureau of Standards

Chemist	1
Cement Tester	1
Blue Printer	1
Asphalt Plant Inspector	2
	5

Bureau of Buildings

Chief of Bureau	1
Civil Engineer Building Inspection Bureau	1
Plan Examiner	1
Building Inspector	6
Electrical Inspector	4
Plumbing Inspector	5
	18

City Engineer's Office

Civil Engineer	2

Bureau of Surveys

Chief of Bureau	1
Civil Engineer	1
Draftsman	9
Computer	8
Clerk	2
Instrumentman	10
Chainman	17
	48

Bureau of Sewers

Chief of Bureau	1
Civil Engineer	1
Draftsman	3
Computer	1
Instrumentman	6
Chainman	5
Inspector of Streets and Sewers	15
Laborer	25
	57

Highways and Bridges

Chief of Bureau	1
Engineer	2
Inspectors	39
Chauffeur	1
Paver	2
Traction Engineer	4
Bridge Carpenter	6
Laborer	30
	85

CIVIL SERVICE BUREAU

Stenographic Clerk	2

AUDITOR'S OFFICE

Clerks and Deputies	21
Stenographer	5
	26

LEGAL DEPARTMENT

Law Stenographers	4

OFFICE COMMISSIONER PUBLIC AFFAIRS

Stenographer	1

SEALER WEIGHTS AND MEASURES

Superintendent	1
Deputy	1
	2

FREE EMPLOYMENT BUREAU

Superintendent	1
Clerk	1
	2

CITY HALL

Superintendent	1
Janitor	9
Plant Engineer	1
Telephone Operator	2
Messenger	1
	14

PARK BUREAU

Superintendent	1
Civil Engineer	1
Clerk	2
Custodian Forestry Building	1
Animal Keeper	1
Superintendent Playgrounds	1
Senior Playground Director	7
Playground Director	28
Swimming Director	4
Gardener	5
Attendant Comfort Station	12
Laborer	68
	131

COMMISSIONER OF PUBLIC UTILITIES

Private Secretary	1
Chief Clerk	1
Stenographer	1
	3

COMMISSIONER OF FINANCE

Private Secretary	1

MAYOR'S OFFICE

Stenographer	1

COMMISSIONER OF PUBLIC DOCKS

Clerk	1
Wharfinger	2
Watchman Docks	6
Stenographer	2
	11

SUMMARY OF WORK OF CIVIL SERVICE BUREAU

Total Registrations	3595
Total Number Applications Filed	1312
Appointments in Classified Service	193
Discharged for Cause	60
Resigned	53
Former Employes Reinstated	5
Total Examinations Held—Promotion 4; Regular 31	35
Total Number Persons Examined During 1915 (to Nov. 31)	1266
Number of Employes in the Classified Service	1818

LIST OF EXAMINATIONS HELD

Date	Title	Applications	Participants	Passed	Rejected
Jan. 5, 1915	Lieutenant of Police (Promotion)	6	5	5	0
Jan. 19, 1915	Lineman	22	8	2	6
Feb. 2, 1915	Sergeant of Police (Promotion)	64	56	19	37
Feb. 16, 1915	Capt. of Fire Bureau (Promotion)	26	24	17	7
Jan. 26, 1915	Wharfinger	35	34	13	21
Mar. 2, 1915	Park Superintendent	8	6	2	4
Mar. 9, 1915	Typewriter—Copyist	6	3	2	1
Mar. 9, 1915	Stenographer (Male)	11	10	6	4
Mar. 16, 1915	Blacksmith	9	8	4	4
Mar. 16, 1915	Blacksmith Helper	7	7	4	3
Mar. 16, 1915	Horseshoer	17	4	3	1
Mar. 30, 1915	Market Master	22	21	4	17
Apr. 6, 1915	Playground Director	51	49	25	24
Apr. 27, 1915	Fire Lieutenant (Promotion)	58	53	26	27
May 6, 1915	Lineman	13	13	6	7
May 11, 1915	Swimming Director	13	13	8	5
May 25, 1915	Attendant	45	37	10	27
May 27, 1915	Assistant Engineer (Stoker)	38	23	6	17
June 1, 1915	Deputy Electrical Inspector	17	17	0	0
June 15, 1915	Patrolman	226	197	33	164
July 6, 1915	Material Inspector (Water Bureau)	14	11	3	8
July 22, 1915	Stenographer	21	16	12	4
Aug. 24, 1915	Pump and Stationary Engineer	41	27	9	18
Aug. 31, 1915	Laborer—Incinerator	49	39	18	21
Aug. 17, 1915	Bridge Carpenter	22	17	3	14
Sept. 14, 1915	Deputy Electrical Inspector	22	22	0	22
Sept. 21, 1915	Motor Bus Inspector	7	5	4	1
Sept. 28, 1915	Gardener	11	9	2	7
Sept. 28, 1915	Asphalt Plant Inspector	7	7	3	4
Oct. 12, 1915	Messenger	5	5	5	0
Oct. 15, 1915	Carpenter	61	36	11	25
Oct. 19, 1915	Laborer	814	458	326	132
Nov. 2, 1915	Assistant Engineer Water Bureau	10	9	*	*
Nov. 30, 1915	Deputy Electrical Inspector	17	17	*	*
		3595	1266	591	649

*Results not ascertained at time of closing report.

Hearing in re-appeal from order of discharge	15
Discharges sustained	13
Appeal withdrawn	1
Order of discharge not confirmed (6 months suspension)	1
Leave of absence granted	50
Reinstatements granted	4
Transfer from one bureau to another granted	2

FINANCIAL

EXPENDITURES 1914-1915

Personal Service	$3,704.52
Office Supplies	277.80
Equipment	91.90
Contingencies	84.48
Fixed Charges (Advertising)	42.66
	$4,201.36

COST OF OPERATION

	1915	1914
Cost per registration capita	$1.17	$1.42
Cost per examination capita	3.32	4.08

ANNUAL REPORT

OF

THE DEPARTMENT OF PUBLIC WORKS

FOR THE FISCAL YEAR ENDING
NOVEMBER 30, 1915

DEPARTMENT OF PUBLIC WORKS

ROBERT G. DIECK
COMMISSIONER

MAIN OFFICE—
C. J. KRUSE, Chief Clerk

BUREAU OF STANDARDS—
R. S. DULIN, Chief.

BUREAU OF BUILDINGS—
H. E. PLUMMER, Chief

- **Building Division—**
  A. S. LOTSPEICH, Chief Inspector
- **Electrical Division—**
  E. F. DUNLAP, Chief Inspector
- **Plumbing Division—**
  WM. HEY, Chief Inspector

CITY ENGINEER—
P. H. DATER

- **Bureau of Highways and Bridges—**
  R. E. KREMERS
  - **Pavement Construction and Maintenance Division—**
    J. HANNAM, C. W. WANZER } District Engineers
  - **Structural Division—**
    R. B. WRIGHT, Chief Inspector
    - **Bridge Maintenance Division—**
      NELS REED, Superintendent
    - **Sidewalk Division—**
      R. F. HURLBURT, Superintendent
- **Bureau of Sewers—**
  J. C. SHARP, Chief
  - **Construction Division—**
    C. A. ROBINSON, Superintendent
- **Bureau of Surveys and Drafting—**
  W. P. HARDESTY, Chief
  - **Drafting and Computing Division—**
    O. A. KRATZ, Chief Draftsman
  - **Survey Division—**
    I. C. ANDERSON, J. J. BROOKS, A. F. MORRIS, H. G. RICHARDSON } District Surveyors
  - **Street Extension Division—**
    C. F. FISHER

DEPARTMENT OF PUBLIC WORKS

GENERAL OBSERVATIONS

Control of Departmental Records—The development of a more stable departmental organization made possible a general improvement in the form and substance of reports. The value of a rigid editing of such papers is becoming evident as reference is made to matters previously treated. The filing system has been bettered in many particulars and the time now employed in retracing matters is gradually being reduced. The mass of correspondence handled through the files has been about the same as in former years, in spite of decreased activities and lessened force.

Efficiency System—Persistent attacks upon the efficiency system, formulated by the Bureau of Municipal Research, have caused its failure, and have produced among the employees a feeling that meritorious work will be neither recognized nor rewarded. Continued agitation in the Council and elsewhere has operated to belittle the value of this system, and to magnify minor defects which soon became evident after the establishment of the system. A device of this sort under constant attack cannot possibly be said to have had a fair trial and, as noted in the previous report, it is felt that with minor changes to eliminate avoidable and burdensome clerical work, the system was both operative and distinctly progressive. The efficiency system was designed to point out, through the medium of work reports, the meritorious or defective work of employees and, while the establishment of an inflexible system of promotions or demotions would be generally unwise and was not in the mind of the Council, the full benefits flowing from such a system may not accrue if promotions or demotions do not reasonably follow.

In the former report, it was urged that steps be taken to establish a system of pensions for employees who had out-lived their usefulness in order that there might be attracted to the service men of more than usual ability and that the force might be provided with new recruits to maintain its effectiveness at the highest point. Until such a system be established, and until the rules of civil service be radically changed as to removals for cause, a considerable part of the force will be composed of employees who, through age, physical defects or indifference, are a burden rather than an aid to administration. A system of pensions is as essential to good government as is the honesty and intelligence of employees.

Changes in Organization—During the year, the major change in the organization of the department has been the creation of an independent bureau charged with the conduct of proceedings for the separation of grades at railway crossings, as it was felt that construction work in this direction might best be controlled through an organization distinct in its functions from those of the Bureau of Highways and Bridges. As established, this unit will be in charge, under the City Engineer, of all work upon the separation of grades. In minor particulars, the Bureau of Highways and Bridges has been reorganized to meet altered conditions resulting from reduced appropriations and to centralize work not before adequately covered.

To overcome a growing difficulty through illegal occupancy of street area, and to prevent encroachment upon public property, the

Street Encroachment Division was formed in the Bureau of Highways and Bridges, to which all matters touching the installation of poles, lamps, filling stations and other obstructions within the street area might be referred. In addition, this unit is charged with the investigation of illegal encroachment upon streets by permanent structures and with the supervision of temporary occupancy of streets by structures permitted under ordinance of the Council.

Replacement of Hard-Surface Pavements—In the report of last year, it was called to attention that unless a fixed and unvarying policy with reference to the replacement of hard-surfac pavements be declared, the City would soon be in a serious predicament. The reconstruction of the worn-out pavement on Washington Street, westward from Twentieth Street, may perhaps be regarded as a declaration of policy, but on this particular street property values are such that the precedent created is not generally applicable in all districts of the City. The disgraceful condition of Alder Street, westward from Sixth Street, remains, and from time to time the department is placed in the embarrassing situation of opposing wasteful and ineffective expenditures by property owners for repairs to a pavement no longer capable of bearing the traffic or of being repaired even in a passable manner. The outlay for repairs made in other years have accomplished nothing of moment. Within the next two or three years, when large areas of paving in all sections of the City, and particularly in the business section, will pass beyond the specified maintenance period, the situation will become tenser, with neither a paving repair plant available nor adequate authority vested in the department to enforce resurfacing under regular procedure. It is certain that the department will be grossly criticised for a condition beyond its power to correct. Immediate provision for the establishment of a paving repair plant is again urged upon the Council.

Establishment of a General Plan for Public Improvements—With continuing agitation for economy in the administration of public works, it is an impossibility to formulate a scheme for public improvements which will bear the simplest test for sufficiency. The heavy reductions in the department have made imperative ceaseless attempts at reorganization and readjustments, productive of much wasted effort and of confusion throughout the organization. The necessarily rapid change in both scope and extent of work authorized, have brought serious misunderstandings of orders with the inevitable consequence that it has been impossible to prosecute work in an economical or orderly fashion. In bad times the first activity to feel the demand for reduction of expenditure is that of public works and therefore it is of interest to inquire what the ultimate effect of such alleged economy may be.

In part, the present stringency in finance may be laid to a certain hyper-sympathy with the citizens and to a mistaken policy of delay in the demand for payment of obligations. The rule of the Council permitting postponement of payment of installments on improvement bonds and in exercising leniency in the collection of interest and other exactions, has, in many quarters, encouraged a marked indifference to the common interest, bringing the general fund to a point of depletion through repeated drafts upon it to avoid default in interest payments. The shortage in this fund has been made the excuse for sweeping reductions in allowances to the several departments and has not operated as a stimulant to collection of the City's just claims,

or as an impulse either to seek other items of possible revenue or to review the whole financial policy. Protest against the danger of such general reductions in allotments to this department has been of no avail, yet the public, unappreciative of the growing demands for maintenance of existing construction, continues insistent upon attention to its demands. The insufficiency of the allotments to the department affords no relief from its responsibility in the proper care of public property; the public judges solely from visible things and admits no excuses. In the mind of the public the lack of funds and men constitutes no valid reason for neglect to repair defects in pavements or sewers and when signs of deterioration appear, it is easier to believe that the department is guilty of indifference and incompetency than to seek the real reason in the dry matter of appropriations. The burden of calmly bearing complaints and unfair criticism, in addition to the realization of the incompleteness of its efforts, becomes most irksome to the department. In spite of this, however, the spirit developed in the department within the past two years and a certain professional pride in the better execution of its work, are notable. That the force has not been utterly discouraged, speaks well for the stability of the organization. Undoubtedly the feeling is present that, in the final court, careful methods will receive public justification. The ruthless and sweeping restrictions in allowances for the fiscal year 1916 will be a supreme test of the organization. Not only must every proposed expenditure in the coming year be subjected to a severe scrutiny, but work not perhaps of immediate concern, yet of far-reaching ultimate service, must be unhesitatingly eliminated from the program. It was just such unwise curtailment of preliminary expense as brought upon the City the avoidable expenditure of $25,000 for the replacement of wrecked Vista Avenue wall and of $45,000 to satisfy an illegal assessment for the Hall Street improvement, when, for an outlay of less than $1000 in preliminary exploration and design, and in proper inspection service, the department might have been freed from unmerited condemnation which has injured its professional standing and stimulated a widespread distrust of its opinions. It is not claimed that every error in design or construction might have been overcome by allowances, however liberal, but it is to the point to say that the very persons who, through the unfortunate outcome of the work cited, have most suffered from unjust criticism, vigorously protested against the precipitate action of the City in commencing work without sufficient data on local conditions and urged unsuccessfully an allowance for more inspection. The City's costly experience in these well-aired cases, has been repeated in many others not generally known and, to any technically-trained person, deficiencies in design and construction, speaking of gross waste of funds and of hurried decision, are everywhere apparent. The discovery and proper adjustment of serious errors in supposedly authoritative elevations of benchmarks along the line of the Oregon-Washington Railroad & Navigation Company regrade project, made possible through the fortunate development of the "bench level survey," certainly places beyond all question of doubt the judgment of the department in urging the modest expenditure of only $8,000, inasmuch as this project, whose cost will exceed one million dollars, and, in bridge construction alone, will approximate $600,000, was, in its inception, saved from sure disaster. When it is realized that for this small sum the entire city has now been covered by a

reliable system of permanent points of reference, adjusted by the established methods of the Geological Survey, and that the first test of the system was a complete success, there must come a feeling that the expense of the survey had amplest justification. The retracing of street lines, the adjustment of field errors so numerous in the old land surveys, the construction of maps of underground structures, the examination and revision of the City's "quarter-section sheets," must certainly impress everyone as activities of unquestionable importance, but, with the limited funds allotted for the year, progress in these directions has been negligible. For the coming fiscal year, the checking of official maps and plans, upon which the whole organization finally depends, must be completely abandoned; maps of the St. Johns and Linnton areas cannot be prepared, and suspected inaccuracies in recorded data cannot be investigated. This is a most serious situation and, remembering the experience of former years, there will be a fine harvest of expensive litigation and of wasteful construction from the use of incomplete and erroneous data. It is common knowledge that a revival of business brings a marked increase in public improvements and if the department be not ready to expand its work promptly, the public will be impatient and innocently will bring about another era of blundering work, which, under a wise policy of preparation, may be avoided.

Improvement Code—The difficulty of undertaking large sewerage projects, like that in the Peninsula, referred to in the last report, still confronts the City. The designs for the Peninsula system are well advanced, but, until the question of assessment upon benefited areas beyond the arbitrary city limits shall have been clarified, it will not be safe to initiate the improvement. The preliminary draft of a statute to correct this defect is under way and a complete regulation having the approval of the Council should be presented for passage as a statute by the next legislature. The importance of such legislation cannot be too strongly urged upon the Council.

The effect of the declared policy of the Council not to initiate improvement proceedings except on the basis of a petition aggregating 40 per cent of the assessable area, has been most marked. The accompanying table and comparison with conditions holding in the fiscal year 1914 are worthy of examination. By a strict adherence to this policy, not only has the Council prevented the initiation of improvements urged before any real demand or reasonable necessity, and the consequent imposition of avoidable expense upon property now carrying its full burden, but has saved wasteful outlays for plans within the department. Furthermore, it has been the department's constant effort to discourage threatened remonstrances through a series of conferences with those opposed to an improvement proceeding and, in a number of improvements, and notably that of the Union Avenue viaduct, serious remonstrances promising annoying legal difficulties, were thus overcome. It appears certain that in the past a number of remonstrances have been filed partly through misunderstanding of the department's intentions and partly through the determined efforts of persons actuated by questionable motives. The detailed improvement maps now required to be prepared are of great aid in stating the attitude of the department and the general interest in them indicates that it is not impossible to win over an objector if he be given opportunity in advance to discuss the matter with the officials and to air his grievances. In former years, no adequate

improvement maps were available and many suits by owners might possibly have been prevented if, in the beginning, they had been properly advised.

Improvement Bond Amendment—As yet, it is too early to determine the precise effect of the charter amendment, adopted in the June election, on the bonding of public improvements. The amendment requires payment of installments and interest semi-annually and admits to bonding assessments in small amount. Not only will payments of semi-annual installments steady the finances of the City and allow the small owner to equalize his burdens, but, greater than all, through the privilege of bonding to as small an amount as $5.00 per ordinary city lot, an owner need not be forced to pay in cash for his simple needed improvements. The assessment for the Willow Street sewer serving Montavilla will probably be completely bonded, but if the old charter provisions were operative, many owners would have been forced to pay in cash in a time of depression. It is expected, also, that many improvements, particularly sewers, before considered infeasible or inadvisable because of the denial of the bonding privilege, will now be initiated and, in spite of the fact that the overhead cost of collection will be increased, the citizens generally will benefit by the more liberal provisions of the amendment.

MAIN OFFICE

RECORDS DIVISION

The needed reindexing of plans and other official documents has been delayed through insufficient help, it being possible to give only occasional attention to this work, as the ordinary current business of the office permits. It is very unfortunate that progress in this direction must be slow, since there are constant calls for filed records which may not easily be traced. The experiment of vertical filing for tracings is being tried and if this should prove successful the system will be generally adopted. The distinct advantages of this method are that valuable vault space is saved and that the tracings themselves are not injured through rolling.

The scheme of issuing stationery supplies on weekly requisition has resulted in much reduced labor in accounting and a more satisfactory control of expenditures. All supplies of this character, except for current weekly uses, are kept at a central point with much economy in their use.

The correspondence handled during the year was slightly in excess of that for 1914, being as follows:

	In	Out	Total
1915	5,188	8,231	14,419
1914	6,863	7,380	14,243

The division also sold to the public blueprints numbering 435 and valued at $81.30.

PERMIT DIVISION

The centralization of all permit matters was finally accomplished in the year and all collections, including fees for the use of water during construction, are now collected at the time of issuance of the permit. This method of handling the permit business has produced very satisfactory results and complaints against delays, common in former years, have practically disappeared.

The number of permits issued and fees for same are as follows:

Kind	No. Permits	Valuation	Fees
Building	4633	$6,210,255	$ 6,916.00
Electrical	6496	464,510	5,901.00
Billboards	173	4,315	87.00
Street Space	1220	.....	.....
Sidewalks	498	.....	927.50
Driveways	113	.....	113.00
Private Grading	6	.....	140.00
Sidewalks, no fee	116	.....	.....
Totals	13255	$6,679,080	$14,084.50

SUMMARY OF SIDEWALK PERMITS

	Lin. ft. sidewalk	Lin. ft. curb	Drive-ways	Fees
East Side	43,314.4	32,285.7	113	$1,005.00
West Side	894.0	90.0	...	35.50
(Issued to City Engineer)				
East Side	12,780.6	11,723.6	...	.....
West Side	1,329.7	1,153.0	...	.....
	58,318.7	45,252.3	113	$1,040.50

The lessened force has prevented the transferring of house numbers to the quarter-section sheets, the time of the employees being largely expended in adjusting street numbers in the recently incorporated areas of St. Johns and Linnton. During the year 630 house numbers were issued.

ACCOUNTING DIVISION

The accounts were placed on a stable basis and are now beginning to furnish the information desired for budget and other work. The accounting room is now called upon constantly by the various bureaus for definite information and has promptly furnished these statements. The method of controlling work undertaken by the allotment of job numbers has not been completely satisfactory during the year since, in spite of distinct orders, it becomes frequently necessary under emergency to proceed with the work without reference of the matter to the Accounting Division. This, in several cases, has caused confusion and delay in the preparation of cost sheets. The control, generally, is good and improvements in accounting methods will probably follow with experience.

BUREAU OF STANDARDS

The bureau is organized of the chemical and physical laboratories and the Blueprinting and Photography Division. It has acted in an advisory capacity to all the municipal departments, Multnomah County, the Commission of Public Docks, the Port of Portland and School District No. 1. Specifications were prepared by it for various materials of construction. The bureau is in position to make complete tests on most of the ordinary materials of construction and many of the supplies in common use. Through its facilities, many of the purchases of these governing bodies may be systematized and placed on a scientific and economical basis. Inasmuch as these several agencies are supported by practically the same body of property, it would seem advisable that duplication of equipment or activity should be carefully avoided and all possible work directed to the bureau.

CHEMICAL LABORATORY

This division is equipped to make investigation of a great variety of products and, if used to the fullest extent, economy and efficiency in the purchase of supplies would be ensured. During the year reports on miscellaneous materials have been made as follows:

Classification	No. of Samples
Fire Hose	30
Paint	19
Oil	2
Cement	5
Wood Blocks	1
Fuel Oil	3
Alloys	8
Coal	7
Timber	1
Creosote	2
Total	78

The bulk of the work of the chemical laboratory has, however, been the testing of materials and mixtures for bituminous pavements laid in the City. The following table covers the field of laboratory control:

Classification	No. of Samples
Asphaltic concrete mixtures	150
Bituminous base mixtures	125
Binder mixtures	26
Bituminous top mixtures	91
Sheet asphalt mixtures	5
Patching mixtures	18
Mineral aggregates	13
Cuts from finished pavements	71
Asphaltum	132
Asphaltic cement	240
Total	871

It has been the effort of the bureau to maintain at each paving plant during the entire time of operation, an inspector charged with the control of mixtures and although it has not always been possible to so station an inspector, there has been closer approach to this ideal condition than in any previous year.

PHYSICAL LABORATORY

During 1915 the equipment of the physical laboratory has been improved by purchase of the following apparatus:

1 Castiron foundry tester,
1 Deval abrasion cylinder.
1 Oil centrifuge,
1 Rock crusher,
1 Specimen-cutting apparatus,
1 150,000 lb. Universal Testing Machine,
1 Friction abrasion apparatus

With this and apparatus previously acquired, practically all materials of construction, such as building tile, brick, cast iron chains, concrete, drain tile, mortars, rock, oils, steel, timber, wire, pavements, etc., may be thoroughly tested.

During the past year the physical laboratory has been profitably used by the Bureau of Buildings in the testing of building tile and brick, and is at present being employed by them in an extensive series of tests upon nailed joints. With each year the work of the laboratory should become increasingly valuable and when the regrade operations are under way, there will be much expansion in the laboratory activities.

Several series of tests upon the effect of creosote treatment on the transverse strength of Douglas fir beams, have been completed, these tests being notable as the first of the kind ever undertaken in this section.

All tests noted in the following tables were made under standard methods adopted by the American Society for Testing Materials and are, therefore, comparable with results in other places.

RECORD OF AVERAGE TESTS ON SEVERAL BRANDS OF PORTLAND CEMENT

BRAND	FINENESS PASSING		TIME OF SET				Accelerated Test, 5 Hrs. Steam, 212 deg. F.	TENSILE STRENGTH					No. of Barrels Tested
			Initial		Final			Neat			1 Cement to 3 Standard Sand		
	100 %	200 %	Hrs.	Min.	Hrs.	Min.		24 Hrs.	7 Days	28 Days	7 Days	28 Days	
Golden Gate	98.6	84.3	4	08	7	09	O.K.	279	696	782	303	447	43,750
Mt. Diablo	97.4	79.4	3	33	6	02	O.K.	363	631	712	283	405	26,925
Olympic	98.1	85.6	4	04	6	59	O.K.	349	715	753	361	508	10,688
Riverside	97.9	82.5	4	15	7	59	O.K.	227	624	680	271	394	3,920
Santa Cruz	97.7	83.8	3	50	6	07	O.K.	410	729	741	369	455	36,000
Standard	96.8	80.5	4	04	7	10	O.K.	337	662	768	255	353	* 3,000
Superior	98.3	85.0	4	23	7	37	O.K.	261	632	748	246	377	881
Washington	99.3	87.6	3	30	6	02	O.K.	359	743	814	273	421	9,455

*1,000 bbls. rejected.

AVERAGE RESULTS OF ABRASION TESTS ON VITRIFIED BRICK

Kind of Brick	Quantity Tested	Average loss on abrasion
Sewer pavers	30,300	21.0%
Beveled edge blocks	7,500	10.8%
Ordinary pavers	38,000	19.9%
Paving blocks	719,875	14.7%
Railroad blocks	102,250	17.4%

MISCELLANEOUS TESTS

Classification	No. of Tests
Building tile	33
Building brick	60
Brass alloy	2
Bronze	8
Castiron	3
Chains	4
Concrete	54
Douglas fir	92
Drain tile	30
Gravel	32
Holding power of nails	78
Holding power of spikes	4
Hydrated lime	14
Mortar	33
Pavements	170
Rock	18
Sandstone	3
Sand	60
Steel	25
Vitrified brick	30
Wire	6
Total	759

BLUEPRINTING AND PHOTOGRAPHY

New and more commodious quarters have been provided and an up-to-date photographic darkroom installed. The rectigraph machine acquired has proven its great value in duplicating maps and plans, copying records and reducing drawings and specifications to sizes suited to field use. The blueprint and photographic work for all departments of the City government, some of the work for Multnomah County and School District No. 1 and occasionally special commercial work are handled in the division.

PRODUCTION

	Blue Paper		White Paper		Blue Cloth		White Cloth		Negatives		Average Val.	Average size Sq. ft.	Rectigraph Print	Photos	
	No.	Sq. ft.	No.	Sq. ft.	No.	Sq. ft.	No.	Sq. ft.	No.	Sq. ft.				Plate	Print
Dept. of Public Works	5774	17814	4448	7201	221	843	1339	4144	664	2320	.....	.....	442	276	1015
Dept. of Public Utilities	1369	2421	471	1965	5	41	184	1265	45	102	.....	.....	163	26	219
Dept. of Public Safety	112	107	50	150	42	350	2	32	2	6	.....	.....	3	9	78
Dept. of Finance	18	54	36	25	.....	.....	.....	.....	2	1	.....	.....	.....	.....	46
Dept. of Public Affairs	257	1283	15	118	8	89	2	41	2	11	.....	.....	2	.....	3
Auditor	1	8	26	174	17	128	.....	.....	.....	.....	.....	.....	2	.....	.....
Multnomah County	2283	10163	97	1043	.....	.....	44	272	29	85	.....	.....	9	.....	.....
O.-W. R. & N. Regrade	115	439	93	96	29	61	31	24	26	109	.....	.....	476	21	664
Miscellaneous	16	40	73	304	18	75	2	11	1	6	.....	.....	181	11	238
Total	9945	32329	5309	11076	340	1587	1604	5789	771	2640	$0.098	2.97	1278	343	2263

EXPENDITURES AND RECEIPTS

Expenses:		
Salaries	$ 1376.70	
Supplies and carfare	1206.07	
Total		$2582.77
Receipts:		
Department of Public Works	1429.88	
Department of Public Utilities	280.34	
Department of Public Safety	43.68	
Department of Finance	5.80	
Department of Public Affairs	41.72	
Auditor	20.22	
Multnomah County	282.67	
O.-W. R. & N. Regrade	146.95	
Miscellaneous	55.31	
Total		2306.57
Loss:		276.20

This loss might be considerably reduced or entirely eliminated if all governmental agencies would lend their full support. The uniformly good workmanship and materials used should secure this, apart from the reasonable charges imposed.

BUREAU OF BUILDINGS

General Observations—The revision of the legislation touching the activities of the bureau has progressed steadily during the year, although, due to restricted force, some of the less pressing needs were not considered. In March, the new Electric Code was placed in effect and published in a convenient size for use in the field. The revised Plumbing Code was presented to the Council after a number of modifications made to the draft recommended by the special committee and, with small modifications, should be enacted. When this is placed in effect the City will for the first time have its plumbing regulations collected in one ordinance and the difficult enforcement by rulings will disappear. No work has been done upon the proposed Housing Code, partly because of the lack of public interest, partly because it seems unwise to urge drastic legislation in time of financial stress, but mostly because of the sweeping reductions in force necessary under the limited appropriation. The discussions of the Building Code Revision Committee have been carried on throughout the year and there is hope that during the year 1916 it will have completed its work. It may have seemed to some that this committee has delayed the submission of the code, but, as the present code is under review in all particulars, much work is required to produce a balanced regulation. Anticipating the passage of the revised code, an amendment touching the installation and operation of automatic elevators was submitted to the Council after approval by the Building Code Revision Committee, and passed. This was a much needed regulation and by its enforcement it is hoped to avoid the occurrence of elevator accidents which, in the last three years, had been steadily increasing in number. Legislation touching the smoke nuisance has been favored by some, but it cannot be urged that there is any great smoke nuisance in the city at this time. The rather few instances in which there has been neglect to control the proper combustion of fuel have been quickly noted and attention of the owners has been promptly called to the objectionable conditions by the inspection force. After explanation of the difficulty, compliance with the request of the department to exercise care in combustion has been generally secured. It is proper to state, however, that there does not exist any legislation which carries authority to correct smoke nuisance if the requests of the department be resisted.

Following the enforced reduction in personnel, rigid investigation of accidents, of elevators, signboards and billboards, of ventilation systems and of maintenance of buildings, has not been permissible and, in some degree, the inspection of buildings under construction has decreased in thoroughness. This curtailment of activities is most unfortunate, since there is intimate relation between all such matters, and if some be neglected, there is a lessened protection to the public.

Building Activities—There has been a notable decrease in the number and valuation of building operations from the previous year, and particularly so in the better class of buildings. The construction of steel frame buildings has been negligible, while reinforced concrete buildings have increased in number and value. There seems to be a tendency to construct buildings of the mill type. Improvements to the river docks were very small in number and extent. Parallel with

the decrease in building construction came a decrease in both electrical and plumbing operations, though in lesser degree. The more important buildings erected during the year were the Meier & Frank department store building, the Couch and the Shattuck Schools and the Stettler box factory. For 1916 there seems to be an indication toward increased activities in all lines, but more particularly in the construction of public buildings.

BUILDING DIVISION

The value of inspection of frame buildings prior to commencement of lath and plaster work has been demonstrated, and fire protection requirements under this arrangement may now be enforced more readily than under the former scheme, thus materially reducing fire hazard in sections where more easily combustible buildings exist. By this procedure the number of inspections made in response to requests, has been much increased. The lengthening of the average distance traveled between inspection points has produced a decrease in the average number of daily inspections per inspector from 19.9 in 1914 to 18.7 in 1915.

The only extension in the division's activities during the year has been in the direction of accident investigation and examination into special complaints. These lines of endeavor have increased the number of inspections by 653 during the year. The desired work of inspection upon foundation walls and chimneys has not been possible of commencement because of reduction of force. In a large sense, this enforced neglect may be regarded as a serious deficiency in administration.

It was considered justifiable to drop the work of examination of dilapidated and decayed buildings within the fire limits because of the general business depression, but as soon as conditions improve the campaign should again be vigorously taken up.

Partly because of reduction in volume of building work, and partly because of a determined effort to secure compliance with the Code through the medium of discussions, the appearance of the department in Municipal Court to prosecute violations under the Code, have been much reduced. It has been demonstrated clearly that most of the difficulties heretofore encountered may be overcome if the parties are willing to treat with each other frankly and settle their contentions.

There was agitation during the year to secure an amendment to the Building Code whereby mill construction buildings one story in height would be permissible within the inner fire limits. The department contended against this amendment in the belief that within the inner fire limits the buildings should be of such substantial nature that they would interpose a solid front to any conflagration. The department, however, conceded that area within the inner fire limits as established was too extensive and compromised to the extent of excluding about 25 city blocks from the inner fire limits. The amendment permitting mill construction buildings was defeated but the inner fire limits were drawn in, in accordance with the recommendation of the department. There is good reason to believe that building operations in the blocks excluded from the inner fire limits will soon be undertaken since it is now permissible to construct buildings of moderate first cost on land of not the highest value.

ELECTRICAL DIVISION

The organization of this division has been maintained as in previous years, the city being divided into inspection districts, each of which is again divided into two sub-districts covered on alternate days. This method of inspection has given uniformly good results and has not caused unreasonable delays to persons wishing inspections. The uninspected services installed during the first years of establishment of the Electrical Division were inspected during the year and practically all of these uninspected installations were examined. There has been a decrease in the number of daily inspections per inspector because of a decrease in the volume of electrical work, but more particularly because of the increased area to be covered and the more elaborate requirements of the new Electrical Code. With experience, this latter difficulty should disappear and the efficiency of inspection should be increased to the former standards.

PLUMBING DIVISION

The Plumbing Division was seriously handicapped by the defective plumbing regulations in force. The reduction in number of daily inspections per inspector from 10.9 in 1914 to 9.1 in 1915 is attributable almost entirely to the increased area covered by the inspection force. With the passage of the proposed Plumbing Code the difficulties of the division should be much reduced, since there will be a lessened demand for rulings in particular cases and certain well-defined rules may be followed.

CLERICAL DIVISION

The improvement in issuance of permits has been quite remarkable, and whereas in former years under the old methods there was constant complaint against delays in issuance, practically all complaint has now disappeared. It is estimated that from one-third to one-half the time formerly taken in securing permits for the construction of buildings has been saved, as all permits for construction, including those for water service during construction, are now issued at one point and all fees collected in one operation.

Special Permits for Building Construction—It seems impossible to avoid entirely the granting of special permits for variations from the Building Code and during the year five ordinances granting special privileges were passed:

Ordinance No. 30479 permits School District No. 1 to construct a four-room addition to the Albina Homestead School in violation of Section 570, which provides that school buildings of a height exceeding one story and basement shall not be of frame construction. The ordinance exempted the School District from this provision and permitted the construction of a two-story and basement addition to the existing school. The department resisted this ordinance, feeling that the grant was a serious mistake inasmuch as it increased the fire hazard.

Ordinance No. 30692 permits Marshall-Wells Hardware Company to increase the height of its buildings on Block 141, Couch Addition, to seven stories, although, under the Code, a building of this type exceeding six stories was not permitted. The Department recommended this grant inasmuch as the foundations for the original building of four stories were designed for a height of seven stories and

the designs were checked for this height. Since the original building was constructed of four stories only, and inasmuch as Marshall-Wells Hardware Company had intended originally to construct it to seven stories, it seemed reasonable to permit this deviation from the Code, particularly as amendment to the Code limiting the height of mill-type buildings to six stories had been passed between the time of the original construction and the request for permit to increase the height.

Ordinance No. 30932 grants permission to the Mason-Ehrman Company for the construction of a marquise to their warehouse at Fifteenth and Overton Streets exceeding the limits imposed by Section 697. The department did not feel that this was a serious deviation and, after consultation with the Bureau of Fire, recommended the passage of the ordinance. Later, the Building Code was amended so that marquises of more generous extent might be constructed.

Ordinance No. 30973 permits the Chas. A. Alisky Estate to alter and repair its buildings at the northwest corner of Third and Morrison Streets in violation of Section 522 of the Code. This building has been seriously injured by fire and it was desired to increase the height of the building from three to four stories. Under the Code it was not permissible to secure a demolition of the building, as it had not been damaged to a sufficient extent and to secure a building of less fire hazard, the department felt that special consideration should be given to the case. The concession was made after agreement had been reached whereby certain specified improvement in the interior construction would be made and that a sprinkler system would be installed.

Ordinance No. 31115 permits Ben Trenkman to reconstruct and maintain a one-story frame building at the northeast corner of Fourth and Flanders Streets in violation of Sections 174, 522 and 654 of the Building Code. Under the Code Mr. Trenkman would have been permitted to remodel the building under the old design but, in an effort to secure a lesser fire hazard through an improvement in construction, it was agreed to allow repair and reconstruction of the building to a greater area and height if certain construction changes were made.

With one exception, that of the Mason-Ehrman Company, therefore, the grants were made in the case of buildings in existence which it was desired to repair or reconstruct. The department successfully resisted all attempts to secure modifications of the Code in new construction.

GENERAL

	Building Division		Electrical Division		Plumbing Division		Total		% Increase or Decrease
	1914	1915	1914	1915	1914	1915	1914	1915	
Total days of inspection	1,324½	1,235	1,418½	1,610	1,235	1,476½	3,978	4,321½	*10.9
Total number of inspections	27,911	23,142	24,728	19,532	15,091	12,815	65,730	55,489	15.6
Ordinance violations discovered	6,642	3,823	7,281	5,397	1,262	843	15,185	10,063	33.8
Municipal Court prosecutions	151	59	21	10	.....	2	172	71	58.7
Circuit Court prosecutions	4	2	.....	.....	.....	.....	4	2	50.0
Jobs without permit	814	510	400	270	.....	.....	1,214	780	35.8
Elevator inspections	60	5	.....	.....	.....	.....	60	5	91.7
Complaints investigated	699	653	5	.....	131	48	835	701	16.0
Billboard inspections	55	152	.....	.....	.....	.....	55	152	* 176.4
Sign inspections	.....	46	.....	.....	.....	.....	.....	†46	.....
Fire reports	62	361	.....	.....	.....	.....	62	361	*482.3
Dangerous buildings and wiring	11	11	33	31	.....	.....	44	42	4.4
Car tickets used by inspectors	4,037	3,761	5,914	5,882	4,951	3,909	14,902	13,552	8.1
Ratio visits to car tickets	6.9	6.1	3.8	3.3	3.1	3.2	.....	.....	.....
Average value of daily permits	$ 25,735.72	$ 22,298.92	$ 1,766.30	$1,667.89	.....	.....	$ 27,502.02	$ 23,966.81	12.8
Average number permits per day	21.5	16.63	27.4	23.32	.....	.....	48.9	39.95	18.3
Average daily inspections per man	19.9	18.7	16.0	14.3	10.9	9.1	.....	.....	.....
Receipts for fees and permits	$ 8,759.50	$ 6,916.00	$ 7,971.25	$ 5,901.50	.....	.....	$ 16,730.75	$ 12,817.50	24.3
Receipts for fees and billboard permits	17.00	87.00	.....	.....	.....	.....	17.00	87.00	*411.8
Receipts account rejected appeals	150.00	60.00	.....	.....	.....	.....	150.00	60.00	60.0
Total receipts, fees and appeals	.....	.....	.....	.....	.....	.....	16,897.75	12,964.50	24.3
Letters written	3,320	2,447	803	503	1,977	1,574	6,100	4,524	25.8
Bulletins sent out	3	1	5	4	.....	.....	8	5	37.5
Sanitary inspection notices sent	.....	.....	.....	.....	186	46	186	46	75.3

N. B.—*Increase. †Not taken up before.

BUILDING PERMITS ISSUED FROM DEC. 1, 1914, TO NOV. 30, 1915.

MONTH	Steel Frame Construction		Reinforced Concrete Construction		Mill Construction	
	No.	Value	No.	Value	No.	Value
December, 1914	1	$1,250,000.00	2	$ 165,000.00	1	$ 5,000.00
January, 1915	1	8,000.00	2	60,500.00	.....	.....
February	.....	.....	.....	.....	.....	.....
March	.....	.....	1	3,000.00	1	75,000.00
April	.....	.....	1	2,000.00	4	44,400.00
May	.....	.....	4	1,230.00	4	118,000.00
June	.....	.....	5	19,665.00	2	37,000.00
July	1	1,500.00	1	2,000.00	3	8,000.00
August	1	300,000.00	4	8,450.00	2	51,800.00
September	.....	.....	8	9,100.00	3	8,200.00
October	.....	.....	2	1,700.00	2	26,000.00
November	.....	.....	.....	.....	.....	.....
Totals	4	$1,559,500.00	30	$272,645.00	22	$373,400.00

1 semi-fireproof building, valuation $1,000.00.

MONTH	Ordinary Construction		Frame Construction		Alterations and Repairs	
	No	Value	No.	Value	No.	Value
December.., 1914	6	$9,730.00	109	$123,625.00	129	$45,450.00
January, 1915	1	2,500.00	142	251,645.00	177	52,305.00
February	5	4,000.00	160	227,690.00	170	77,150.00
March	9	22,950.00	242	305,345.00	259	76,360.00
April	5	143,050.00	211	278,655.00	239	80,810.00
May	5	29,000.00	144	201,355.00	196	66,980.00
June	3	1,750.00	171	248,675.00	200	150,195.00
July	5	125,050.00	145	186,310.00	165	47,795.00
August	3	30,195.00	170	262,265.00	228	74,060.00
September	6	36,350.00	193	179,370.00	248	63,190.00
October	8	43,340.00	151	157,935.00	223	118,220.00
November	3	5,540.00	129	157,690.00	171	45,895.00
Totals	59	$453,455.00	1967	$2,580,560.00	2405	$898,410.00

MONTH	Wreck		Move		Excavate	
	No.	Value	No.	Value	No.	Value
December, 1914	6	$625.00	1	$100.00	.....	.....
January, 1915	9	505.00	3	410.00	2	$ 1,100.00
February	7	1,675.00	2	225.00	.....	.....
March	5	600.00	5	625.00	.....	.....
April	5	5,300.00	.....	.....	3	2,100.00
May	8	690.00	6	830.00	3	3,600.00
June	6	560.00	1	150.00	1	1,000.00
July	4	205.00	2	115.00	.....	.....
August	5	450.00	1	50.00	2	1,700.00
September	4	450.00	1	160.00	.....	.....
October	4	285.00	2	250.00	1	350.00
November	5	650.00	1	200.00	2	620.00
Totals	68	$11,995.00	25	$3,115.00	14	$ 10,470.00

BUILDING PERMITS ISSUED FROM DEC. 1, 1914, TO NOV. 30, 1915—Continued.

MONTH	Docks—New		Docks—Alterations and Repairs		Billboards	
	No.	Value	No.	Value	No.	Value
December, 1914	2	$1,600.00	2	$225.00	4	$ 220.00
January, 1915	1	400.00	4	675.00	4	225.00
February			3	1,000.00	2	250.00
March	2	18,075.00	3	1,800.00	5	130.00
April	2	1,600.00	7	1,500.00	2	85.00
May			3	10,380.00	1	450.00
June	1	100.00			29	344.00
July			2	2,400.00	2	550.00
August					58	706.00
September			1	3,000.00	59	573.00
October			5	2,950.00	5	767.00
November					2	15.00
Totals	8	$21,775.00	30	$23,930.00	173	$4,315.00

BUILDINGS GRADED ACCORDING TO OCCUPANCY

MONTH	GRADE I Public Buildings		GRADE II Quasi-Public Bldgs. Hotels, Office Bldgs., Stores, etc		GRADE III Tenements	
	No.	Value	No.	Value	No.	Value
December, 1914	4	$172,200.00	6	$1,259,300.00	1	$2,000.00
January, 1915	1	60,000.00	10	41,500.00	1	35,000.00
February	4	6,600.00	5	3,250.00		
March	4	11,000.00	4	95,500.00		
April	2	1,000.00	11	68,100.00	2	145,000.00
May	1	26,000.00	14	147,860.00		
June	3	2,150.00	14	66,050.00		
July	3	118,000.00	18	23,780.00		
August	2	45,150.00	12	420,945.00		
September	2	2,740.00	12	38,200.00	1	10,000.00
October	6	13,780.00	11	64,065.00		
November			7	9,040.00		
Totals	32	$458,620.00	124	$2,237,590.00	5	$ 192,000.00

MONTH	GRADE IV Dwellings and Flats		GRADE V Stables and Sheds		GRADE VI Miscellaneous	
	No.	Value	No.	Value	No.	Value
December, 1914	56	$109,250.00	42	$5,355.00	10	$5,250.00
January, 1915	80	180,200.00	52	5,245.00	2	700.00
February	94	203,725.00	58	7,690.00	4	10,425.00
March	128	278,300.00	107	14,615.00	10	6,880.00
April	103	240,400.00	99	10,480.00	4	3,125.00
May	69	165,570.00	60	8,345.00	13	1,810.00
June	77	229,175.00	67	6,020.00	21	4,695.00
July	69	170,470.00	60	6,635.00	5	3,975.00
August	67	167,475.00	92	10,590.00	7	8,550.00
September	67	156,800.00	118	13,920.00	10	11,360.00
October	56	127,650.00	87	9,340.00	3	14,140.00
November	54	144,850.00	65	6,595.00	6	2,745.00
Totals	920	$2,173,865.00	907	$104,830.00	95	$73,655.00

TABLE OF VIOLATIONS BUILDING DIVISION

1.	Poor foundations	178
2.	Defective construction	882
3.	Too close to lot line	40
4.	Defective chimney	685
5.	Heating apparatus and enclosures	46
6.	Elevators and enclosures	67
7.	Stair and shaft enclosures	131
8.	Roofs and roof drainage	37
9.	Fire blocks and bridging	1,027
10.	Sidewalk and street obstructions	61
11.	Light and ventilation	48
12.	Fire protection of openings	33
13.	Defective scaffolds	...
14.	Stable regulations	44
15.	Miscellaneous	414
16.	Fire escapes, exits, stand pipes, etc.	1
17.	Frame buildings in fire limits	79
18.	Dangerous buildings	50
	Total	3,823

BUILDING PERMITS ISSUED DURING THE PAST YEARS

YEARS	Number	Total Valuation	Average Value of Permit
1900	392	$944,985.00	$2,410.00
1901	745	1,529,143.00	2,050.00
1902	1,244	2,730,660.00	2,195.00
1903	1,628	4,281,056.00	2,630.00
1904	1,720	4,029,225.00	2,340.00
1905	2,318	4,183,368.00	1,805.00
1906	3,166	6,902,032.00	2,180.00
1907	3,890	9,446,982.00	2,430.00
1908	4,849	10,405,151.00	2,145.00
1909	4,739	13,481,380.00	2,845.00
1910	6,523	20,886,202.00	3,200.00
1911	7,686	19,152,370.00	2,495.00
1912	8,224	14,652,071.00	1,780.00
1913	*6,244	*12,316,350.00	1,970.00
1914 (Dec. 1, 1913, to Nov. 30, 1914)	6,166	7,373,285.00	1,195.00
1915 (Dec. 1, 1914, to Nov. 30, 1915)	4,633	6,210,255.00	1,345.00
Totals	64,167	$138,524,515.00	2,160 00

*11 months only covered in report.

ELECTRICAL PERMITS ISSUED

MONTH	1912			1913			1914			1915			TOTALS		
	No.	Total Valuation	Avg. Value per Permit	No.	Total Valuat'n	Avg. Value per Permit	No.	Total Valuat'n	Avg. Value per Permit	No.	Total Valuat'n	Avg. Value per Permit	No.	Total Valuat'n	Avg. Value per Permit
December	.....	.....	.....	.....	.....	.....	615	$ 47,715.00	$77.60	486	$ 76,355.00	157.74	1,101	$ 124,070.00	112.70
January	.....	.....	.....	583	$ 44,700.00	$76.80	632	34,590.00	54.60	442	27,430.00	62.05	1,657	106,720.00	64.41
February	.....	.....	.....	495	34,350.00	69.40	544	36,015.00	66.50	494	24,525.00	49.64	1,533	94,890.00	61.89
March	.....	.....	.....	639	106,070.00	166.60	863	56,275.00	65.20	541	40,405.00	74.68	2,043	202,750.00	99.24
April	.....	.....	.....	709	49,450.00	69.80	769	34,615.00	45.10	579	35,330.00	61.02	2,057	119,395.00	58.04
May	.....	.....	.....	665	41,445.00	62.30	711	37,925.00	53.30	524	53,265.00	101.65	1,900	132,635.00	69.81
June	.....	.....	.....	594	54,280.00	91.50	603	53,150.00	88.00	492	29,015.00	58.97	1,689	136,445.00	80.73
July	.....	.....	.....	646	58,085.00	89.95	580	37,750.00	65.00	509	36,545.00	71.79	1,735	132,380.00	76.30
August	318	$ 16,191.00	$50.80	691	67,865.00	98.00	632	50,345.00	19.60	572	46,215.00	80.97	2,213	180,616.00	81.62
September	567	28,360.00	50.00	761	49,940.00	65.50	744	41,925.00	56.40	663	36,155.00	54.53	2,735	156,380.00	57.18
October	708	40,395.00	57.80	864	102,510.00	118.80	635	38,590.00	60.75	638	30,445.00	47.72	2,845	212,440.00	74.67
November	568	42,505.00	75.00	689	44,115.00	64.00	531	37,155.00	69.90	556	28,825.00	51.84	2,344	162,600.00	65.11
Totals	2,161	127,951.00	59.20	7,336	652,810.00	88.98	7,850	506,050.00	64.45	6,496	464,510.00	71.51	23,852	1,751,321.00	$73.42

BOARD OF APPEAL

BUREAU OF BUILDINGS—ELECTRICAL DIVISION
July 1, 1915, to December 1, 1915.

The following is the Report of the Board of Appeal:

Regular meetings held	2
Special meetings held	5
Appeals considered	2
Appeals granted	2
Appeals denied	0
Appeals withdrawn	0
Appeals under consideration	0

The following general rulings were made:

October 20, 1915. Section 1, paragraph 3, to read:

"The word 'Owner' wherever used in this ordinance, shall mean the owner of any building in or on which any electrical equipment has been or is about to be placed."

October 20, 1915. Section 1, paragraph 6, to read:

"The word 'approved' wherever it occurs in this ordinance as applying to fittings or materials, shall mean any fitting or material which has been examined and found to comply with the provisions of this ordinance and is suitable for the use intended; and wherever applying to workmanship, it shall mean workmanship that complies in all particulars with the provisions of this ordinance."

October 20, 1915. Section 1, paragraph 8, to read:

"The word 'conduit' wherever used in this ordinance, shall mean approved rigid metal conduit, flexible steel conduit and armored conductors. For the purpose of extensions only to conduit systems, metal moulding may be installed as conduit under the rules governing the installation of metal moulding given in Sections 48 and 51."

October 20, 1915. Section 44, paragraph (c):

The Board interprets that "service" shall constitute the conductors from the point of attachment to the Power Company's lines into the building to the branch cut-outs.

October 20, 1915. Section 44, paragraph (d), to read:

"Service wires for all buildings must be installed in conduit from a point not less than ten (10) inches nor more than twenty (20) inches beyond outside vertical line of the building wall to and entering iron cabinet for main service and cut-out switch."

October 20, 1915. Section 45, paragraph (d2), to read:

The second paragraph of this Section to read as follows: "Floor, baseboard or other flush receptacle outlets are not to be included in computing the wattage capacity for lighting in any of the buildings specified below. These outlets in all classes of buildings must be rated at 100 watts each as a minimum."

October 20, 1916. Section 45-(f):

The limit in this circuit schedule proper shall be raised to six (6) circuits, or more.

October 20, 1915. Section 52, paragraph (g):

"When canopies are used as a substitute for rosettes on drop cords, such canopies must be provided with a metal nipple and socket

bushing. This metal nipple must be at least as long as the bushing and securely attached to the canopy. Canopy drop cords, single light pendants (not rigid), receptacle collar and wall brackets may be supported by wood screws through the edge of canopies, except in conduit systems."

"October 20, 1915. Section 52, paragraph (h), to read:

"All ceiling lights and chandeliers, where lights are suspended from a spinning or pan or similar device at ceiling, said fixtures or chandeliers must be suspended from an insulating joint, tripod or equivalent device."

October 30, 1915. Section 45, paragraph (a):

The Board rules that "readily accessible," as used in this ordinance in regard to cut-outs and switches, shall mean "placed in such a location that they will not, under any ordinary conditions, be concealed by any obstruction, so that they may be readily reached by the average person in case of emergency," which means that they shall not be placed higher than approximately eight (8) feet above the floor. Cut-outs and switches may be mounted on the outside walls of buildings where they are protected from the weather, providing that the switches, cut-outs and meter loop are enclosed in a weather-proof cabinet.

October 30, 1915. Section 53, paragraph (d):

This Section to read: "Metal shell key sockets must not be used within seven (7) feet of basins, sinks, toilets or bathtubs, nor in any room which has a floor which is permanently damp. Where pull chain sockets are used, they must be of the insulated pull chain type. Metal shell pendant switches must not be used for the control of lights covered in this Section."

October 30, 1915. Section 89, paragraph (a):

The Board will permit the use of refillable fuses in buildings where an Electrical Engineer is permanently employed, and who has made application in writing to the Electrical Division for permission to use such fuses. This applies to the Economy and Great Western refillable fuses at present, and all refillable fuses which, like them, meet the requirements of safety which the Board deems necessary, until such time as the Board can be satisfied that this special Decision should be made broader.

BUREAU OF GRADE SEPARATION.

Sullivan Gulch Regrade—During 1915 all field work relating to the preparation of plans and specifications for grade elimination in Sullivan Gulch, was completed. Exhaustive studies of various types of construction were made and the use of rolled girders encased in concrete decided upon. This type of construction is both pleasing in form and reasonable in cost, securing, in addition, shallower depths of section, shorter approaches and less resultant grade changes than other types. The engineers of the Railroad Company were consulted as to the most economic location of the track gradient to produce minimum damage to property adjacent to the line, and still to provide favorable trackage facilities. After fullest discussion, it was agreed to establish the grade line as follows:

1—From a point 200 feet west of Sandy Boulevard to East Sixtieth Street, an ascending 1 per cent compensated grade.

2—From East Sixtieth to East Eighty-second Streets, an ascending 0.42 per cent grade.

3—From East Eighty-second Street, a level grade to an intersection with the present track grade.

This establishment comprehends an average depression of tracks of about eleven feet with a corresponding average elevation of streets, at the viaducts, of fourteen feet, allowing a clearance of twenty-one feet above rails. The deviation from the standard clearance of twenty-two feet was permitted on special order of the Public Service Commission, as a compromise, inasmuch as all negotiations between the City and the railroad company had been on the basis of a twenty-one-foot clearance.

Seven viaducts, finally, are proposed, located at Sandy Boulevard, East Forty-seventh Street, East Fifty-third Street, East Sixtieth Street, Halsey Street (Barr Road), East Seventy-fourth Street and East Eighty-second Street. In the original plans a viaduct was proposed for East Forty-second Street but, after strong representations of the railroad company, the Council agreed not to require a viaduct at this point, feeling that desirable factory sites would, by the construction, be rendered useless.

Proceedings are about completed for the vacation of the existing crossings at East Fifty-second and East Fifty-fifth Streets. Access to these from the East Fifty-third Street viaduct will be provided through a marginal street to be opened along the north line of the railroad property. The railroad company has granted right of way across the tracks at East Seventy-fourth Street near the Jonesmore School in Montavilla.

Under the provisions of the Charter Amendment of June, 1913, it would have been necessary to institute individual proceedings for each crossing, with contract and assessment for each. To avoid such a cumbersome method of handling a project which, essentially, from a railroad standpoint, is a single project, a Charter Amendment was submitted in the June election in 1915 and adopted, providing that all units in a grade elimination may be included under one procedure. The passage of this amendment has materially aided in furthering a rational development of the regrade project and has reduced the legal and assessment difficulties. Unexpected delays of a legal nature,

arising from the novelty of the undertaking, have been encountered at every step, but it is expected that plans and specifications will finally be presented to the Council in the fall of 1916, and actual construction commenced about the first of 1917. The estimated cost of the viaduct construction, exclusive of any outlay for adjustments in the railroad area, is about $594,500.00. Delays in proceeding to contract will probably increase this amount, since the prices of all materials are on the ascending grade.

Union Avenue Viaduct—Plans have been completed for a reinforced concrete viaduct 219.5 feet in length and 58 feet in extreme width on Union Avenue over the tracks of the Oregon-Washington Railroad & Navigation Company's Peninsula Branch. Upon completion, this structure will form a direct connection with the Interstate Bridge now under construction across the Columbia River. The cost of the viaduct, including approaches, will approximate $51,000, exclusive of paving, which will be undertaken under regular street improvement procedure.

Miles Street Viaduct—Proceedings have been initiated providing for the elimination of the Portland, Eugene & Eastern grade crossing at Miles Street in Fulton Park. Numerous conferences have been held with the company's engineers, resulting in the formulation of general plans acceptable both to the Company and to the City. Detailed plans and specifications will be prepared in 1916 and it is possible that construction may be undertaken early in 1917. The cost of this project is approximately $10,000.00.

The Oregon Electric Railway crossing in the immediate neighborhood offers equal danger to traffic and its elimination is of equal importance. It is the present intention to include this as part of the general improvement of traffic conditions and new proceedings to this end will be initiated.

BUREAU OF HIGHWAYS AND BRIDGES

CONSTRUCTION DIVISION

The construction of permanent street improvements is set out in detail in tabulation. In addition, repairs to pavement cuts and to defective pavements were made as follows:

	Number	Sq. Yds.
Utility cuts	2307	
Waterworks and sewer cuts	948	
Pavements repaired under maintenance	....	2042.8
Pavement repairs paid for by City	....	981.6
Pavements repaired on account of enlarging curved corners	....	898.2
Pavement repairs paid for by abutting owners	....	1145.2

Comparison of the year's work with that of former years indicates a decided tendency towards the installation of what may be termed "standard" pavements as against the cheaper types, for which latter there was for a few years a strong and insistent demand. This change in attitude appears to have arisen from the conclusion of property owners that low first cost is of lesser moment than durability and serviceability. The change may have been in part a result of the marked reduction in unit prices offered for the standard pavements and the closer approach of these prices to those of the second-class pavements. With the prevailing moderate prices, there is no valid reason for experimentation with untried or less durable types of of pavement. This change in attitude also has lessened the difficulty of the department in attaining a higher standard of pavement construction.

The decrease in volume of paving operations has permitted of more attention to the important details of lines, crowns and grades for pavements. The hurried work of the past has much injured the appearance of the streets and has increased the difficulties of traffic and drainage. It has not been possible to overcome entirely the past practice of working out details of pavement construction in the field, but strong effort is now being put forth to develop all essential details of construction before contract is under way. In my opinion, this is one of the most important developments of the year and its effect will be lasting.

Ever since the commencement of the paving program of the city, there has been contention regarding the installation of water service connections. The Bureau of Water Works has objected to the laying of dead services as the deterioration in them is productive of serious leakage in the system, increasing the need for inspection and repair. On the other hand, the Bureau of Highways and Bridges, desiring to prevent the breaking of street surface wherever possible, has contended for the installation of all possible services when permanent pavements are built. These two ideas were more or less antagonistic and there seemed no common ground for operation, until finally the matter was taken up by the Commissioners in charge of the Departments of Utilities and Works, who, after a thorough discussion, decided that the contention of the Bureau of Water Works was of greater moment than the inconvenience of cutting pavements and that, in

future, service connections would be installed only upon written application of owners, with the approval and actual supervision of the Bureau of Water Works. In this way a better quality of workmanship may be secured and undesired connections will be eliminated from the streets. The plan has had insufficient trial to warrant any judgment as to its feasibility.

As improvement work slackens in the rainy weather, the inspection force has been delegated to erect street signs. During the year 2,866 new signs were so erected, 553 signs repaired and 64 obsolete signs removed. The practice of installing enameled signs has been discontinued and all street signs are now made by the Traffic Division at lessened cost and of a type less exposed to injury.

Asphalt Repair Plant—The need of a municipal asphalt plant is becoming increasingly evident and, in the next few years, it will be imperative. The antiquated and unsatisfactory method of making repairs to bituminous pavements through general contracts or private arrangements with paving companies, must impress everyone and the inconvenience to traffic occasioned by allowing disturbed areas to remain for long periods without attention, amply justifies the small outlay for a plant. It is not necessary that this plant should be elaborate, but a start shold be made in the purchase of a small unit plant. This purchase should not be postponed beyond 1917. The cost of maintenance of pavements on the contract or agreement system will reach such a figure that there will be demand for reduction in expense and the pavements will suffer from the neglect of minor faults. With pavements, as with no other construction, deterioration progresses rapidly and the probable losses through neglect will overtop any reasonable initial outlay for a plant.

MAINTENANCE DIVISION

This division is charged with the repair of macadam and gravel streets and the replacement of crosswalks and drains. Its detailed activities are set out in table —. A departure from the ordinary work undertaken by the division was made during the summer and early fall in the reshaping of graded dirt streets whose surfaces had become rutted for various reasons. Continued complaint had been filed against the impassability of great lengths of these graded streets and to relieve the condition the department was authorized to purchase three grading outfits which, drawn by the road roller equipment of the department, would rapidly reshape these and make them passable. In this work the regular repair crews were employed and, in all, about 37½ miles of streets were thus treated at a cost of $5,560.79—approximately $148.00 per mile, or $7.40 per ordinary city block. This modest expense has been amply justified by the results, not alone in the decided improvement in local conditions, but in the postponement of the time of undertaking permanent street improvements in districts where land values are small and the burden of prior assessments heavy. The unit costs, above mentioned, are, of course, the maximum to be expected, since subsequent work on these streets will be of minor extent. If the work be prosecuted at regular intervals of, say, one or two years, it is probable that the expense may be reduced one-half and a regular street crown constantly maintained.

STRUCTURAL DIVISION

The most important structures designed and erected by the division were a reinforced concrete retaining wall located on the west side of

Grand Avenue between Brooklyn and Beacon Streets, in connection with a street improvement. The wall is 185 feet in length and 30 feet in maximum height and of the counterfort type with vertical face placed on the curb line. This design has proven of great economy and has been adopted for sidehill work. In the design, provision was made for future construction of a cantilever sidewalk if traffic conditions warranted. Designs were also prepared for retaining walls and stairways in connection with the improvements on Summit Drive, Talbot Road, East Thirteenth Street, Seventeenth Street at Jackson Street, East Twenty-eighth Street at Clinton Street and Ankeny Street at the harbor line.

The redecking with creosoted wood blocks of the Grand Avenue bridge over Sullivan Gulch, let in 1914, was completed under contract.

Upon complaint of the United States Engineer Office against the existence of obstructions to navigation below the Morrison Street bridge, investigation was made by divers and, following the examination, the remains of piers and false work of the old bridge at this point were removed under contract with the Pacific Bridge Company. The work received the approval of the United States Engineer Officer.

Plans and specifications were prepared for the raising to established grade of portions of the Union Avenue bridge over Sullivan Gulch, whose foundation had settled. Contract for the raising was entered into and the work completed in September, 1915, about one-half the cost being met by the Spokane, Portland & Seattle Railway Company, following its agreement to assume joint responsibility with the City. The bridge is now in line and has given no evidence of additional settlement.

Studies were made of various dangerous street intersections, with a view to their improvement for traffic and as a result of these, the following important intersections were rebuilt from ordinary funds of the department:

East Thirty-fifth Street at Belmont Street;
East Thirty-ninth Street at Belmont Street;
East Twenty-fourth Street at Broadway;
East Twenty-eighth Street at East Burnside Street.

These changes have resulted in much improved traffic movement.

Comparative tests of bridge paints were inaugurated by the division, portions of the steel work on the Front Street bridge being painted with the several paints. Definite conclusions may, of course, not be reached without observations of at least one or two years, but the results probably will indicate the life and wearing qualities of the paints available in the local market. All the test paints were donated, but the labor expense for painting was met by the City.

BRIDGE MAINTENANCE DIVISION

For a long time the decking of the Thurman Street bridge had given much trouble and frequent complaints had been filed. Attempts to make partial repairs were ineffective and finally appropriation was secured to redeck the entire structure. The extent of deterioration could not be determined in advance but, after the deck planking had been removed, practically the entire wooden superstructure was found in serious state of depreciation and the unexposed steel work much rusted. Many of the stringers and subplanking had to be removed so that the final work practically may be called a complete reconstruction of the wood deck. In this work decision was made to use selected vertical-grain lumber for the wearing surface, in spite of an added cost

of about $4.00 per M. It is believed that the increased life of this material will amply justify the added expense. On this structure the street railway tracks are located within a short distance of the curb lines, allowing the car bodies to extend about to the curb lines and, in some types of cars used, the steps to overhang, so that, to protect pedestrians using the walks, standard gas-pipe railings were installed on each side of the bridge. The cost of the entire operation, part of which fell in 1914, was $2,818.71.

The steel work of the Grand Avenue bridge was entirely repainted. Most of this material was found to be in a rusted condition and required scraping before application of the paint. Somewhat similar conditions were found at the Union Avenue bridge, work on the repainting of which was commenced but not completed during the year.

Practically all of the iron railings along stairways and retaining walls in the hill sections were repainted and placed in first-class condition.

The Borthwick Street and Macadam Street timber trestles were redecked.

A storage shed was constructed in the materials yard at Kerby and Stanton Streets for the storage of patterns for the Broadway bridge, at a cost of about $200.00. This expenditure avoids expensive storage charges for the patterns and allows the forms to be collected in a safe place.

A great mass of minor repairs was made to the various bridge structures in the city and barricades erected at dangerous street ends. All necessary carpenter work within the City Hall fell under this division.

SIDEWALK DIVISION

Concrete Walks and Curbs—Property having a frontage of 14,300 lineal feet, or about 27.15 miles, was posted for defective walks and curbs, while 44,820 lineal feet, or about 8.49 miles of concrete sidewalk and curbing were constructed under permit and inspected. The City crews performed the following work:

Concrete sidewalk, 81,370 square feet,

Concrete curbing, 10,688 lineal feet,

making a total of about 2.02 miles.

Curved Corners—In various sections of the city 183 sidewalk corners were built to increased radius for the safety of vehicular traffic, including those mentioned as designed by the Structural Division. The value of this reconstruction work is becoming evident to the public and there are constant demands for work in all parts of the city which the restricted allowances will not permit to be made.

The sidewalk forces performed other concrete work as follows:

Manufacture of fifty city boundary monuments;

Encasement of steel work of the Front Street and First Street bridges:

Construction of a retaining wall at the East Stark Street fire station;

Repair of the Montgomery Drive retaining wall;

Construction of a four-foot toe wall along Vista Avenue directly below the Montgomery Drive retaining wall.

TRAFFIC DIVISION

A small amount of work, only, on traffic observation was possible, but certain surveys in connection with proposed jitney-bus regulation.

the re-routing of cars on the West Side loops and for the determination of crossings on the proposed grade elimination in Sullivan Gulch, were made. In the coming year it is purposed to again take up the observations on traffic that former observations may be checked and any marked variations in traffic movement discovered. The division made investigations of certain apparatus and devices for traffic control submitted by manufacturers, and reported on their serviceability.

The painting of street and warning signs and of all signs used by other departments was undertaken under this division, and the following is a summary of this work:

Warning signs lettered	690
Warning signs installed	230
Street signs lettered	2,101
Miscellaneous signs lettered	274
Street sign blanks dipped	2,796
Warning signs repaired and replaced	110

GRASS AND WEEDS DIVISION

No appropriation being available for the active removal of weeds and grass from streets and private property, the work of the division was confined solely to the posting of notices for removal and in solicitation of owners to have noxious growth removed. With resident owners the division's efforts were generally successful, but with non-resident owners the difficulties of previous years still remained. Much complaint was filed against the department for its inabiilty to secure removal of weeds from lots in possession of non-resident owners and the statements that no funds existed for removal were not believed. From the experience gained it is clear that the cutting should be vigorously pressed or that the ordinances should be repealed. If there be any lack of uniformity in enforcement of the ordinances, there is bound to be criticism of officials, even though they are not accorded the means to secure removal of noxious growth. It has been proposed that the Bureau of Street Cleaning undertake the cutting of weeds and grass within street area and that, through the police, owners be forced to cut weeds and grass on their own properties. Under this scheme, the dififculty with non-resident owners will remain, but this department would not suffer unfair criticism from its inability to attain definite results. The operations of the division were as follows:

Lots posted for removal of grass and weeds	6,592
Lots posted for removal of earth slides	521
Complaints received and investigated	1,592

In addition to this general work, assistance was rendered in the removal of rubbish from public places and in the campaign to clean up about billboards and the railway entrances to the city.

STREET ENCROACHMENT DIVISION

This division was organized July 1, 1915, to supervise investigations of encroachments of various kinds upon street area. Its general functions were to determine the uses of streets, both fixed and transitory, other than traffic, and to make such necessary surveys as would tend to clear the streets of unlawful or undesirable obstructions. The possibilities in this direction are great, since on streets in the congested sections there is an ever-changing and increasing demand for

space. As showing the character of service performed, sixteen buildings and fences established within street lines were investigated and action of ejectment taken. In most cases, however, recommendation was made to the Council that owners of structures thus illegally placed be permitted to continue in occupancy of the street area provided they made unqualified statement that no claim for ownership would rest in them through the occupancy, and that they would vacate upon demand of the City without demand for damages. Twenty-seven applications for gasoline filling stations were received and reported upon, and in addition three applications were investigated in advance of filing, the applicants being informed that their applications would not be approved. A survey was also made of the existing filling stations to determine the extent of advertising matter upon them, following which the Council directed that all advertising be removed from the pumps to conform with ordinance.

STREET MAINTENANCE DIVISION

	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Total	Miles
Old Macadam or Gravel Streets Redressed—														
Lin. ft.	12,405	15,386	18,095	32,331	17,178	18,789	23,359	13,642	3,950	.....	11,914	23,756	190,805	36.1373
Sq. yds.	48,890	5,679	71,832	96,297	62,484	63,673	87,081	46,473	15,733	.....	34,494	77,144	609,780	.....
Cubic yards, Rock	116	299.5	69	452	160	583.5	2	147.5	.....	.....	352	410.5	2,592	.....
Cost	$2317.88	3184.25	2692.83	3600.86	2866.79	3689.42	2600.48	2141.23	1285.20	.....	1737.94	2659.46	28,784.34	.....
Unit cost	.0474	.0561	.0375	.0374	.0459	.0579	.0298	.0461	.0081	.....	.0501	.0345	.0472	.....
Block Pavement Repaired—														
Square yards	851	373	534	258	386	.....	556	470	741.5	155	685.5	497.5	5507.50	.....
Cost	569.34	527.67	381.45	305.31	474.88	.....	690.01	488.59	1078.87	299.00	357.91	302.03	5475.06	.....
Unit Cost	.669	1.41	.714	1.184	1.23	.....	1.24	1.04	1.455	1.93	.522	.607	.9941	.....
Earth Grade Roadways Regraded or Redressed—														
Lineal feet	.....	.....	.....	.....	.....	.....	.....	12,696	73,922	76,036	34,165	1,535	198,354	37.567
Square yards	.....	.....	.....	.....	.....	.....	.....	51,544	327,330	262,283	116,191	3,103	760,451	.....
Cost	.....	.....	.....	.....	.....	.....	.....	516.14	2114.95	2057.39	790.45	81.86	5560.79	.....
Unit Cost per square yard	.....	.....	.....	.....	.....	.....	.....	.01	.0065	.0079	.0068	.0264	.0073	.....
Crosswalk Constructed—														
Square feet	9,085	4,272	615	1,314	1,936	3,108	5,849	6,769	6,026	5,912	3,692	5,416	53,994	.....
Cost	810.77	355.32	83.35	168.85	140.40	208.13	373.10	420.44	414 14	385.63	254.74	367.51	3982.38	.....
Unit Cost	.0892	.0832	.1355	.1285	.0725	.067	.0638	.0621	.0687	.0652	.074	.0678	.0738	.....

CONSTRUCTION DIVISION—WORK COMPLETED UNDER ORDINANCE

	Unit	Dec.	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Total
Hard Surface Pavement	Sq. yds.	8,689	6,586	.....	.....	21,226	20,440	40,421	41,563	52,567	30,289	44,522	8,859	275,162
Concrete Sidewalk	Sq. ft.	11,422	6,863	12,841	72,167	143,748	80,291	89,696	108,933	54,659	63,698	43,009	29,625	716,883
Concrete Curb	Lin. ft.	3,248	1,787	2,314	12,492	24,575	13,532	17,369	18,935	9,311	13,172	10,318	6,914	133,967
Wood Sidewalk	Sq. ft.	.....	.....	.....	.....	177	522	1,371	.....	1,908	.....	729	.....	4,707
Wood Crosswalks	Sq. ft.	688	176	.....	1,016	7,795	5,360	8,169	1,488	2,136	6,484	696	2,096	36,104
Wood Curbs	Lin. ft.	.....	.....	.....	.....	.....	.....	47	.....	.....	.....	.....	.....	47
Box Gutters	Lin. ft.	110	.....	.....	106	819	239	342	.....	189	863	58	230	2,956
Drain Pipe	Lin. ft.	486	224	.....	1,084	1,669	1,152	1,296	1,411	1,608	785	804	2,100	12,619
Drain Tile	Lin. ft.	.....	.....	.....	.....	.....	.....	1,860	3,325	4,804	1,406	3,890	1,628	16,913
Catchbasins and Inlets	No. of	10	11	6	10	41	45	27	29	51	31	18	11	290
Drainage Sumps, Depth	Lin. ft.	.....	.....	.....	.....	140	28	10	.....	.....	15	.....	28	221
Water Service Pipe	Lin. ft.	16	.....	120	.....	3,839	1,461	2,125	2,599	811	1,217	2,835	828	15,851.5
Pavement Header	Lin. ft.	.....	.....	.....	.....	94	526	676	352	1,629	228	1,581	.....	5,086
Water Serv. Connections	No. of	.....	.....	.....	.....	.....	.....	37	67	36	30	14	.....	184
Macadam Roadway	Sq. yds.	3,708	76	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,784
Stone Block Gutter	Lin. ft.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	960	960

BUREAU OF SEWERS

MAINTENANCE DIVISION

General Repairs—Work in this division was of the usual routine nature, the most important jobs being:

1. The Reconstruction of the Sewer on the Thurman Street Bridge—This work consisted of the replacement of 12-inch and 8-inch vitrified sewer pipe, supported on shelving below the deck, with wood stave pipe of the same diameter. The vibration of the bridge structure had caused serious leakage throughout the line and the contact of leaking sewage with the steel columns had produced corrosion in the steel. To increase the life of the pipe, the inner and outer surfaces were painted with coal tar. This construction will be of interest as an experiment to determine the durability of wood stave pipe in sewer construction. As an additional experiment, 100 lineal feet of 12-inch vitrified sewer pipe was replaced with smooth, ingot pipe coated with asphaltum, for determination of the durability of this material in sewer construction.

2. The Construction of the East Grant Street Sewer—The sewer in East Grant Street between East Forty-eighth and East Fiftieth Streets, laid in 1910 as a part of the north branch of the Brooklyn sewer, had proven unsatisfactory for service because of imperfect grade. Wet soil and indifferent inspection by the City were evidently the contributing causes of failure. Deposits had formed in the sewer and at one point had completely interrupted the flow. The new work is laid in concrete and no further trouble should follow.

The Turbine Sewer Cleaning Machine, purchased early in the year, has been most effective in operation, permitting the removal of roots, sand, reset cement and other foreign materials which reached the sewerage system. The machine is adapted to use with all standard diamaters of pipe up to 24 inches, and has produced marked savings in cost of removing obstructions which heretofore had been done by expensive hand methods with considerable injury to permanent pavements and disturbance to traffic. Table —— sets forth in detail the operations of the machine.

The outfall of the West Washington Street sewer was extended to the harbor line for the prevention of deposits under the dock. Some improvement has followed this work, but the river current at this point is insufficient to prevent deposit at all stages of the river. It is believed the complete prevention of deposits may be attained by an extension of the sections to the harbor line through submerged, flexible, jointed pipe. The expense of this desired work was not permissible under the restricted appropriations. The outfalls at Madison, Yamhill, Morrison and Alder Streets on the west side were similarly extended to the harbor line and, generally, the results have been satisfactory. The outfall of the Johnson Creek Trunk sewer at Front and Nicolai Streets was extended to the harbor line through a submerged section of creosoted wood stave pipe built at the site and lowered into final position. The experience of the department is that this type of construction is the most economical and feasible for outfalls under local conditions.

CONSTRUCTION DIVISION

Reconstruction of Tanner Creek Sewer—Plans and estimates have been prepared for the reconstruction of the Tanner Creek sewer from

Seventeenth and Taylor Streets to an outfall into the Willamette River. These plans, which probably will need adjustment in detail, comprehend the construction of approximately 6,000 lineal feet of sewer to replace a section known to be in an extremely dangerous condition and of insufficient capacity for even the present needs, and the repair and reinforcement of 1,000 lineal feet of existing sewer. Refilling of the abandoned section sof sewer and the reconstruction of house services as needed, are also included in the plans. The total estimated cost is:

New sewer	$243,992.70
Repaired sewer	13,060.00
Refilling old sections	10,305.00
House connections	1,798.50
Removing debris from old sewer	550.00
Total	$269,706.20

It is anticipated that much difficulty will be met within the preparation of an assessment for the work, since the system now in place was constructed at various times and, more or less, as local necessity required. The unusual complexity of the case demands that a special scheme of assessment be devised, since no precedent exists.

Relief Sewer for the East Oak Street System—For some time the sewers in the vicinity of East Twenty-eighth and East Flanders Streets had been overcharged with showers of little more than average intensity. To remove this condition, a redesign near the upper limits of the system was proposed, comprehending the construction of a relief sewer on East Thirty-first Street from East Flanders to East Irving Streets with outlet into the Sullivan Gulch system, and a relief sewer on East Twenty-eighth Street from East Flanders to East Stark Streets with outlet into the East Stark Street system. The construction of these sewers will provide the necessary relief to the East Oak Street system without appreciable overcharge to either the East Stark Street or the Sullivan Gulch system. As an immediate betterment, the first section of the relief sewer on East Thirty-first Street was constructed from general funds at a cost of $1,288.40, it being felt that, due to certain errors in design, the City was responsible for this defect. No rain of extreme intensity has occurred since the completion of the sewer and it is not known positively if the construction of the other relief is an immediate necessity. The estimated expenditure of $20,000 for the other sewers seems, however, not to be required in the present development of the drainage basin.

Sewerage for the Peninsula District—Topographical surveys for the Peninsula sewer district, covering approximately 21,000 acres, have been about completed at a total cost of $16,210.00, or approximately 78 cents per acre. The office maps of about 80 per cent of this area have been platted at an approximate cost of 20 cents per acre. The remaining field work consists largely of current observations in the various water courses of this sections, for the determination of tidal and stream effects. Such observations must, of course, be continued over several complete seasons. Most of the work heretofore done in this direction has been rendered useless by the construction of fills for the approaches to the Interstate Bridge, which have disturbed the normal currents.

In seeking an outlet for this important system, consideration has been given to an outfall into the Columbia Slough or into the Columbia River. The former introduces the question of proper dilution of sewage

and suitable channels have been under discussion for some time. Without extensive dredging, Columbia Slough seems unsuitable for sewage discharge because of the sluggish current at low water stage of the Columbia River. There is little doubt that outfall into this stream would occasion an excessive first cost and heavy maintenance charges in the control of silting action at the upper entrance. The Columbia River seems to afford the rational point of outfall. Considerable attention has been given to the method of disposal and there are under consideration disposals under the combined, separate and mixed systems. No definite conclusion as to this may be reached until the current observations are in good form and comparative estimates of cost under the various methods have been prepared. Before final decision is reached as to the point of outfall and method of disposal, it is strongly recommended that the whole project be reviewed by an acknowledged authority on sewerage construction and by an authority on the hydraulics of the Columbia River. The project is of such magnitude and complexity that the best technical advice should be secured.

Efforts are being put forth by residents in the Peninsula district to organize a drainage district under the provisions of a statute passed in the last session of the legislature to include all land draining directly into the Columbia Slough, regardless of arbitrary boundaries. The idea behind this project is the formation of a channel for shipping, to serve a proposed harbor in North Portland adjacent to a large area suitable for industrial development. The United States Engineer Officer for this district is now making preliminary investigations for the preparation of a report on the project. If the development be made to include a substantial dredging of the upper end of the slough, it may be feasible to discharge sewage into the slough, but, before committing itself to such a plan, the City should be convinced from sufficient data that the entire ship channel may be maintained at all stages of the river without silting or fouling. This department has furnished the United States Engineer Officer with copies of topographic maps of the slough area and all data in its possession.

Rain and Sewer Gauges—The rain and sewer gauges in the Holladay Avenue sewer district were maintained during the year. All results have been tabulated, but, as the intensity of rainfall has been below the average, the results secured are not considered of great importance in the determination of run-off. The station will be maintained during the coming year. (See table)

Inadequacy of the Inlet System—In the retail business section of the West Side, it has become clear that in ordinary storms the inlets are of insufficient capacity to discharge gutter flow during sharp showers in the fall. Many of the inlet gratings become fouled with fallen leaves and large volumes of water pour into the business section from the adjoining hills, creating a condition which threatens extensive property damage. It is desirable that as much as possible of this flow be kept from the business section by additional catchbasin construction, not alone within the limits of the district, but on the fringes. Within the area bounded by Burnside, Front, Jefferson and Fourteenth Streets, which may be called the danger zone, it is estimated that 678 inlets to cost approximately $24,500, are needed for adequate drainage. The desirability of the construction is unquestionable, but whether or not the General Fund should bear the burden of cost, is open to ques-

tion. The restricted appropriations for 1916 will, in no event, permit of much work along this line.

Defective Sewer Construction—Certain defects in sewer construction have developed in a number of localities, during the year, for the most part, chargeable to imperfect construction of pipe joints through which, after heavy rains, the refilled earth has been permitted to enter the sewer, causing earth settlements over the sewers on both public and private property. It is feared that many other cases will present themselves in coming years and that large expenditures must be made to correct the faults. The difficulty of showing neglect on the part of contractors to execute sound construction may prove too great for recovery of costs against them and, finally, the City will probably be forced to make repairs from general funds. It is quite clear from observations made on these defective sewers that the attempted economy in expenditures for inspection is more than off-set by the ultimate cost for repairs and that the City should demand from contractors an increased time of maintenance in order that less obvious defects may have time to develop.

Willow and East Eighty-second Street Trunk Sewer—The largest single operation of sewer construction was the construction of the Willow and East Eighty-second Street trunk sewer, which was commenced and virtually completed for service during the year. This sewer constitutes the fourth and final unit of the trunk sewer system to serve the East Stark Street sewer district, providing main drainage for the district of Montavilla and serving an area of about 700 acres lying eastward from East Sixty-third and Willow Streets to the city limits. Upon construction of small lateral sewers, the drainage for the Montavilla district will have been finally accomplished.

This contract included the construction of the following:

4,278 lineal feet of 60-inch reinforced concrete sewer,
7,597 lineal feet of 54-inch reinforced concrete sewer,
1,658 lineal feet of 42-inch reinforced concrete sewer,
2,311 lineal feet of 36-inch reinforced concrete sewer,
1,634 lineal feet of 30-inch reinforced concrete sewer,

and several hundred feet of vitrified sewer pipe of diameters up to 24-inch.

The main features of interest on this contract were the manufacture and the laying of the reinforced concrete pipe. There were no exceptional difficulties in the manufacture of the pipe other than at inception of the work, when a lack of uniformity in thickness of the shell and roughnes sof surface appeared. In a large measure, the varying thickness was overcome by a more rigid spacing of the inner and outer steel forms, which, from their flexibility, permitted slight distortions and eccentricity. At first, considerable trouble was experienced through adhesion of concrete with the steel forms, causing areas of roughness. This defect to no objectionable extent lessened the strength of the sewer, but produced somewhat greater friction. The roughness was either plastered or grouted over, except where large areas were affected, in which case the imperfect sections were condemned and broken up. The difficulty appeared only in construction of the largest sizes of pipe. With the first sections cast, three days after pouring, only, was allowed for removal of the bases and tipping on the side. In some cases this practice resulted in the formation of small cracks due to insufficient hardening of the concrete, and, to avoid recurrence of this, in the sections later made, no tipping

was allowed for a period of two weeks after pouring. This revised method overcame the trouble completely.

All pipe of the largest size was laid on planking to maintain the alignment and to secure a uniform flow line, which, if there be any compression in the soil, may not readily be attained. Along the whole line of the sewer, the material encountered was loose, heavy sand and gravel, requiring close sheeting for the entire depth of trench. This material did not permit the heavy sections of pipe to be laid on a firm foundation and as a result the first sections laid showed slight checks at crown and invert upon the deposit of backfill. These checks were in the nature of hair line checks extending a short distance into the shell of the pipe, but in no way endangered its strength. To avoid the formation of these checks and any damage which might later be occasioned by continuing the backfill where the pipe might not be under complete observation, it was sought to devise an improved method of laying. After various trials and experiments the methods of construction shown as types G and H in the accompanying (Fig.) were followed and checking was almost entirely overcome. These types consisted generally of the laying of two boards lengthwise of the sewer about the quarter points and, to meet soil conditions, the construction of shoulders of concrete up to or somewhat below the springing line. These provisions afforded the solid foundation lacking in the soil. Of the total length of 11,800 lineal feet of 54-inch and 60-inch pipe, 9,200 lineal feet were reinforced by the methods known as types G and H. After the backfill had been in place for a period of from six to twelve months, no additional checks appeared and in some cases the checks entirely disappeared. Inasmuch as the greatest load came upon the pipe during placing of backfill, it is certain that no additional checking may occur from now on and that eventually the load on the pipes will be much reduced by the arching effect of the backfilled earth.

In the smaller diameters of pipe, reinforcement was used only for portions of the 42-inch. Slight checking occurred in some of the 36-inch and 30-inch pipe after backfill, but these checks were not of sufficient extent to warrant any expenditure for side support as for the larger sizes. In all cases where checking occurred, these were filled and painted over with neat cement grout to prevent the passage of moisture to the reinforcement.

The appearance of the checking from backfill is not new in the construction of cement pipe lines and, from all the evidence in hand, it will appear that what were considered here as defects have in other places been overlooked or treated as mere incidents of construction. The sewer as built is unquestionably of first-class quality and of ample security.

TABLE I

Amount of Each Contract Completed and Accepted During Fiscal Year 1915

Contractor.	Contract.	Working Days.	Amount of Contract.	Total Amt. Work done by Contractor.	Cost of Inspection			
					For Each Contract	For Each Contractor	% of Total For Contract	% of Total for Contractor
Geo Gordon	E 74th St. Thorburn Ave. and E.72nd	45	$6,411.80	$6,411.80	$179.50	$ 179.50	2.8	2.80
Azar & Co	Base Line Rd and E 78th St	84	6,059.49		328.15		5.4	
	Tolman Ave. and E. 15th St	36	3,331.60		174.95		5.3	
	E. 70th and E. Yamhill Sewer System	196	7184.12		668.75		9.3	
	Upper Dr., Montgomery to Alley	38	1,405.04		201.10		14.3	
	E. Stephen and Clay St. Sewer Sys.	35	4,289.66		150.70		3.5	
	E. Stephens, E 29th to 30th	4	175.15		13.45		7.7	
	E. Market, E. 29th to 30th	4	180.19		13.50		7.5	
	E. 50th and E. Couch St. Sewer Sys.	29	2,652.33		115.00		4.3	
	26th Ave., 27th Ave. and 45th St. S.E	15	872.54		64.00		7.3	
	Sullivan St., E. 29th to L. 7, York	13	275.50		41.50		15.1	
	29th and Upshur St. Sewer	63	1,972.05		248.95		12.6	
	E. 58th, Sandy to Sacramento	37	1,323.08	29,720.75	131.55	2,151.00	9.9	7.23
E. Sandeberg	Long Ave. and 45th St. Sewer System	55	15,457.05		381.10		2.5	
	E. Kelly, E. 31st to 35th St	12	1,234.35		37.03		3.0	
	Private Property at Roswell	20	1,190.10		63.90		5.4	
	E. 31st, E. Glisan to Irving Sts	19	1,288.40	19,169.90	87.65	569.68	6.8	2.97
F. Callans	Tibbetts St., E. 31st to E. 36th	52	1,950.68	1,950.68	221.05	221.05	11.3	11.32
K. Y. Azar	Long Ave. Extn. Holgate St. Sewer	153	17,559.08	17,559.08	986.40	986.40	5.6	5.61
Albert & Kanbolff	48th St. S. E., 29th to 27th Ave	27	490.10		49.60		10.1	
	49th St. S. E., Division to 27th	15	432.69		38.80		9.0	
	E. 26th, Stephens to Harrison	14	276.96		46.50		16.8	
	E. Franklin, 31st to 35th Sts	37	1,105.57		136.35		12.3	
	E. 58th and E. Everett St. Sewer	29	1,097.96	3,403.28	110.90	382.15	10.1	11.23
Koff & Prior	47th St., S. E. 29th to 27th Aves	16	411.82		30.00		7.3	
	48th St. S. E., Division to 27th	12	332.79		46.30		13.9	
	49th St , 29th to 27th Aves	14	480.35	1,224 96	44.40	120 70	9.2	9.85
Chas. Solomon	Broadway and Wheeler St	16	544.64		65.40		12.0	
	47th St. S. E. and 26th Ave. S. E	11	318.26	862.90	43.90	109.30	13.8	12.67
Solomon & Haddad	E. 55th and E. Everett St. Sewer	17	916.43		54.65		6.0	
	E. Grant, E. 34th to Ernestine Add	9	246.05		48.10		19.5	
	E. Kelly, Miner's Add. to E. 36th	27	1,709.16	2,871.64	148.35	251.10	8.7	8.75
Solomon & Narren	E. 28th St., Woodward to Clinton	26	415.90	415.90	92.65	92.65	22.3	22.28
Steinfeld & Co	E. 62nd St., 290′ S. of Glisan, to E. Glisan	11	190.50	190.50	57.70	57.70	30.3	30.28

TABLE I—Continued
Amount of Each Contract Completed and Accepted During the Year 1915

Contractor	Contract	Working Days	Amount of Contract	Total Amt. Work done by Contractor	Cost of Inspection		% of Total	
					For Each Contract	For Each Contractor	For Contract	Total for Contractor
J. P. O'Neill	Thompson, 182 ' W. of E. 28th to 28th	8	114.16	.....	24.00	.....	21.0	.....
	31st Ave. S. E. and Tibbetts St.	23	1,427.36	.....	67.75	.....	4.7	.....
	E. Franklin and E. 39th St. Sewer.	44	3,234.19	4,775.70	169.25	261.00	5.2	5.47
Wm. Lind	Exten. of Rhine St. Trunk Sewer.	258	102,085 00	102,085.00	2,979.30	2,979.30	2.9	2.91
Toriff & Callilay	Insley Ave. and E. 19th St. Sewer.	24	710.38	710.38	88.10	88.10	12.4	12.40
Abraham & Co.	E. Clay St., 29th to 30th Sts.	9	177.52	.....	27.70	.....	15.6	.....
	28th Ave. S. E., 41st to 45th Sts.	36	948.33	1,125.85	137.60	165.30	14.5	14.67
C. B. Randles	System of Sewers in WestoverTerraces	49	6,618.12	6,618.12	331.55	231.55	3.5	3.50
Nat'l. Tank & Pipe Co.	Outfall of Johnson Creek Sewer.	14	665.32	665.32	53.90	53.90	8.1	8.10
			199,761.76	199,761.76	9,000.98	9,000.98	.....	4.51

TABLE II.

Cost of Contracts Awarded, Sewers Accepted and Plans Filed During Fiscal Year 1915.

MONTH	Cost of Sewer Work Awarded (Con. Price)	Cost of Sewer Work Accepted (Final)	Est. Cost of Sewer Plans Filed	No. of Sewer Plans Filed
December, 1914	$1,985.18	$6,411.80	$7,331.34	3
January, 1915	150,158.31	21,516.54	145.25	1
February	2,799.90	7,184.12	2,045.25	3
March	6,568.41	25,679.43	5,082.00	2
April	4,408.42	3,649.86	14,312.20	5
May		109,032.30	298.60	1
June	7,391.63	3,254.60	5,602.95	4
July	10,335.77	3,992.33	17,406.51	2
August	22,650.36	872.54		
September	426.50	7,841.95	7,985.45	3
October	4,545.92	5,138.38		
November	18,201.58	5,187.91	16,089.27	4
Total	$234,471.98	$199,761.76	$76,298.82	28
5%		9,890.40		
Total		$209,652.16		

TABLE III

Expenditures for Sewers Since 1865.

YEAR	Expended During Year	Total End of Year
1889	$140.346	$ 381.790
1890	49,144	430.934
1891	61,510	492,444
1892	249,669	742,113
1893	171,649	913,762
1894	21,198	934,960
1895	16,793	951,753
1896	13,005	964,768
1897	5,488	970,246
1898	7,000	977,246
1899	12,517	989,763
1900	19,391	1,009,154
1901	113,187	1,122,341
1902	57,008	1,179,349
1903	140,137	1,319,486
1904	58,482	1,377,968
1905	69,142	1,447,110
1906	69,706	1,516,816
1907	92,781	1,609,597
1908	77,407	1,687,004
1909	313,426	2,000,430
1910	905,718	2,906,148
1911	556,291	3,462,439
1912 (Dec. 31)	566,973	4,029,412
1913 (Dec. 1)	778,284	4,807,696
1914	367,380	5,175,076
1915	209,652	5,384,728

TABLE IV
Length, Size and Material of Trunk Sewers Laid to December 1, 1915

Size Inches		Monolithic Concrete			Conc. Pipe	Brick	Wood Pipe			Total	Total
		Laid from 1875 to Dec. 1, 14	Laid Dec. 1 '14, to Dec. 1, '15	Total Laid to Dec. 1, '15	Total laid Dec. 1, '15	Sewer Total Dec. 1, '15	Laid to Dec. 1, '14	Laid from Dec. 1, '14, Dec. 1, '15	Total Dec. 1, '15	All Kinds Dec. 1, '14, to 12-1-'15	All Kinds to 12-1-'15
24	Circular	1,722	.....	1,722	.....	4,576	.....	.....	.....	.....	6,298
27	"	2,563	770	3,333	4,319	.....	.....	.....	.....	770	7,652
28	"	.....	.....	.....	.....	750	.....	.....	.....	.....	750
30	"	22,780	1,955	24,745	6,370	3,026	.....	.....	.....	1,955	34,141
32	"	3,575	.....	3,575	.....	2,259	.....	.....	.....	.....	5,834
33	"	4,894	1,426	6,320	2,289	.....	.....	.....	.....	1,426	8,609
34	"	.....	.....	.....	.....	2,397	.....	.....	.....	.....	2,397
36	"	7,280	.....	7,280	3,151	5,017	.....	.....	.....	.....	15,448
38	"	.....	.....	.....	.....	1,105	.....	.....	.....	.....	1,105
39	"	.....	.....	.....	2,182	.....	.....	.....	.....	.....	2,182
40	"	.....	.....	.....	.....	3,469	.....	.....	.....	.....	3,469
42	"	4,470	.....	4,470	6,776	3,402	.....	.....	.....	.....	14,648
43	"	1,300	.....	1,300	.....	.....	.....	.....	.....	.....	1,300
44	"	.....	.....	.....	.....	1,230	.....	.....	.....	.....	1,230
45	"	3,211	.....	3,211	.....	.....	.....	.....	.....	.....	3,211
46	"	.....	.....	.....	.....	2,653	.....	.....	.....	.....	2,653
48	"	6,933	.....	6,933	.....	3,402	100	.....	100	.....	10,435
50	"	.....	.....	.....	.....	359	.....	.....	.....	.....	359
51	"	757	.....	757	.....	.....	.....	.....	.....	.....	757
52	"	.....	.....	.....	.....	1,614	.....	.....	.....	.....	1,614
54	"	2,490	777	3,267	747	1,722	.....	.....	.....	777	5,736
56	"	276	.....	276	.....	2,325	.....	.....	.....	.....	2,601
57	"	1,017	.....	1,017	.....	.....	.....	.....	.....	.....	1,017
58	"	.....	.....	.....	.....	780	.....	.....	.....	.....	780
60	"	3,548	7,983	11,531	561	1,446	.....	70	70	8,053	13,608
62	"	3,877	.....	3,877	.....	2,521	.....	.....	.....	.....	6,398
63	"	.....	2,477	2,477	.....	.....	.....	.....	.....	2,477	2,477
64	"	.....	.....	.....	.....	969	.....	.....	.....	.....	969
66	"	1,318	.....	1,318	2,552	1,921	.....	.....	.....	.....	5,791
68	"	.....	.....	.....	.....	460	.....	.....	.....	.....	460
72	"	2,145	.....	2,145	.....	6,684	.....	.....	.....	.....	8,829
74	"	.....	.....	.....	.....	140	.....	.....	.....	.....	140
76	"	.....	.....	.....	.....	1,600	.....	.....	.....	.....	1,600
78	"	3,385	.....	3,385	.....	162	100	.....	100	.....	3,647
80	"	.....	.....	.....	.....	2,147	.....	.....	.....	.....	2,147
82	"	.....	.....	.....	.....	260	.....	.....	.....	.....	260
84	"	4,208	.....	4,208	.....	1,968	.....	.....	.....	.....	6,167
87	"	3,046	.....	3,046	.....	.....	.....	.....	.....	.....	3,046
90	"	.....	.....	.....	.....	742	.....	.....	.....	.....	742
96	"	723	.....	723	.....	.....	.....	.....	.....	.....	723

TABLE IV—Continued

Length, Size and Material of Trunk Sewers Laid to December 1, 1915

Size Inches		Monolithic Concrete			Conc. Pipe	Brick	Wood Pipe			Total	Total
		Laid from 1875 to Dec. 1, 14	Laid Dec. 1 '14, to Dec. 1, '15	Total Laid to Dec. 1, '15	Total laid Dec. 1, '15	Sewer Total Dec. 1, '15	Laid to Dec. 1, '14	Laid from Dec. 1, '14, Dec. 1, '15	Total Dec. 1, '15	All Kinds Dec. 1, '14, to 12-1-'15	All Kinds to 12-1-'15
116	"					833					833
118	"					1,021					1,021
120	"					3,230					3,230
24x36	Egg Shape	6,947		6,947		1,527					8,474
26x39	"	1,320		1,320							1,320
26x39.5	"	556		556							556
28x42	"					1,806					1,806
29x44	"					964					964
30x45	"					2,504					2,504
34x51	"					510					510
39x59	"					698					698
40x60	"					4,298					4,298
44x66	"					3,762					3,762
48x72	"					3,079					3,079
49x73.5	"					3,760					3,760
54x81	"					3,678					3,678
60x84	"					3,984					3,984
59x88	"					1,828					1,828
64x96	"					1,815					1,815
66x96	"					2,147					2,147
30x45	Horse-Shoe	78		78							78
40x40	"	2,767		2,767							2,767
45x42	"	5,689		5,689							5,689
48x43	"	1,212		1,212							1,212
48x50	"	401		401							401
48x59	"	791		791							791
54¾x60	"	1,487		1,487							1,487
60x62	"	3,776		3,776							3,776
72x67	"	2,082		2,082							2,082
72x69	"	3,321		3,321							3,321
72x71	"	3,719		3,719							3,719
72x73	"	2,285		2,285							2,285
72x66	"	1,512		1,512							1,512
72x71.5	"	3,081		3,081							3,081
90x75¾	"	851		851							851
90x80¾	"	2,940		2,940							2,940
90x85⅞	"	3,990		3,990							3,990
	Total	134,333	15,338	149,721	28,947	102,550	200	70	270	15,458	281,488

TABLE V

Length, Size and Material of Pipe Sewers Laid to Dec. 1, 1915.

Size Inches	Shape	VITRIFIED PIPE			CEMENT PIPE			Total Both kind to Dec. 1, 1915
		Laid from 1875 to Dec. 1, '14	Laid Dec. 1, 1914, to Dec. 1, '15	Total laid to Dec.1,1915	Laid from 1875 to Dec. 1, '14	Laid Dec. 1, 1914, to Dec. 1, '15	Total laid to Dec.1,1915	
6	Circular	480,515	30,706	511,221	127,700	7,023	134,723	645,944
8	"	668,312	33,092	701,404	111,760	10,436	122,196	823,600
9	"	45,034	.....	45,034	.....	.....	.....	45,034
10	"	311,810	8,952	320,762	42,740	4,054	46,794	367,556
12	"	307,258	6,733	313,991	23,437	2,140	25,577	339,568
14	"	122,233	7,119	129,352	14,323	1,332	15,655	145,007
15	"	20,144	.....	20,144	.....	.....	.....	20,144
16	"	75,330	2,445	77,775	5,285	456	5,741	83,516
18	"	39,298	2,517	41,815	7,937	861	8,798	50,613
20	"	38,336	139	38,475	6,221	.....	6,221	44,696
22	"	22,573	1,160	23,733	4,177	899	5,076	28,809
24	"	41,936	530	42,466	3,340	.....	3,340	45,806
30	"	670	.....	670	.....	.....	.....	670
Total	.....	2,173,449	93,393	2,266,842	346,920	27,201	374,121	2,640,963

Total pipe sewers laid Dec. 1, 1914, to Dec. 1, 1915....120,594 lin. ft., or 22.84 mi.
Pipe sewers, not including 6" pipe..... 82,865 lin. ft., or 15.69 mi.
Total length, all sewers accepted during 1915, not including 6" pipe..... 98,323 lin. ft., or 18.62 mi.

TABLE VI

Miscellaneous Contract Items for Year 1915

Elbows and bends (vitrified) 6"	No. of	1683
8"	"	2
Elbows and bends (cement) 6"	"	475
Manholes (standard)	"	296
Manholes (Type "A ')	"	5
Manholes (Drop)	"	15
Catchbasins—Concrete	"	14
Inlets—Concrete	"	235
Excavation—earth	Cu.Yds.	137,705
Excavation—loose rock	"	5,283
" solid rock	"	47
Extra concrete 1-2-4	"	2.4
" " 1-2½-5	"	17.45
Extra lumber, M ft., B. M		119.4
Extra brick	No. of	280
Extra gravel	Cu yds.	407
Sewer connections	No. of	19
Deep house connections	"	1
Sewer pipe, 2nd class, vitrified, 6"	Lin. ft.	2,507
Sewer pipe, 2nd class, vitrified, 8"	"	4,749
Junction chamber, 48"x63"		1
Pavement taken up and relaid—Asphalt	Cu.yds.	25.6
Pavement taken up and relaid—Bitulithic	"	459.1
Pavement taken up and relaid—Hassam	"	30.5

TABLE VII.

Amount of Storm Water Reaching Sewer—Holladay Avenue Sewer District.

Total area of District.....205.36 acres
Total impervious area (roofs, pavements and sidewalks...82.93
Total paved area (pavements and sidewalks that are solid between property and curb) 41.47
Total area of roof surface (approx.)..... 24.26 acres

DATE OF STORM	Duration of Storm		Computed Volume of Rainfall by Rain Gauge	Total Flow in Sewer by Sewer Gauge	Per Cent Run-Off on Total Area	Per Cent Run-Off on Impervious Area
	Hrs.	Min.	Cu. ft.	Cu. ft.		
Nov. 20 and 21, 1915...	21	53	752,864.1	172,847.9	23%	57.4%
Nov. 22 and 23, 1915...	14	16	1,133,023.2	303,731.5	26.12%	66.39%
Nov. 24 and 25, 1915...	10	24	499,424.7	129,487.5	25.92%	64.20%
Nov. 28th.....	12	50	521,787.0	129,271.1	24.77%	61.34%
Nov. 29th.....	1	16	81,995.1	19,804.7	24.15%	59.81%

TABLE VIII.

Showing Amount of Work Done by Maintenance Division During the Year.

Kind of Work Done	Amount of Work Done			COST	
	East Side	West Side	Total	Total Cost	Average Cost
Building Catch Basins.....	39	22	61	$1803.39	$29.56
Repairing Catch Basins.....	133	229	362	1627.51	4.50
Flushing Catch Basins.....	158	201	359	446.18	1.24
Flushing Sewers.....	40	16	56	97.91	1.75
Repairing Manholes.....	160	55	215	*1625.47	
Repairing Lampholes and Mon. Covers.....	26	4	30	86.49	2.88
Filling Settled Trenches.....	75	14	89	272.42	3.04
Locating House Laterals.....	49	4	53	558.84	10.54
Repairing House Laterals.....	38	3	41	299.16	9.74
Constructing House Laterals.....	14	....	14	493.43	35.25
Opening Sewers to Remove Obstructions.....	10	10	20	852.88	46.64
Opening C. B. Pipes to Remove Obstructions.	5	7	12	619.38	51.62
Repairing Sewers.....	4	10	14	446.35	31.88
Dragging Sewers, lin. ft.....	1170	200	1370	139.00	0.10
Laying New Pipes to connect C. B.'s.....	17	22	39	1369.42	35.10
Building Catch Basins account change of radius	32	75	107	1481.75	13.85
Flushing Intakes.....	2	4	6	56.33	9.39
Flushing Outfalls.....	2	6	8	99.89	12.49
Opening Stopped Sewers.....	42	12	54	491.00	9.09
Inspecting Sewers.....	6	3	9	16.84	1.87
Cleaning Sewers with Turbine.....	....	....	....	2311.04	.....
Investigating Complaints.....	42	28	70	49.43	0.71
Miscellaneous Work.....	24	9	33	1028.83	31.18
Building Manholes.....	....	....	16	850.08	53.13
Special Work.....	....	....	....	15,107.42	.....
Total.....				32,331.24	

*This amount includes the cost of tarring 386 Manhole Covers.

OPERATION OF SEWER CLEANING MACHINE (TURBINE)

MONTH	Lin. ft. Sewer Cleaned (all sizes)	Miles	Total Cost	Cost per Lineal Foot
January	4,500	.85	105.94	0.024
February	1,050	.20	56.56	0.054
March	6,465	1.22	136.44	0.021
April	8,080	1.53	272.32	0.034
May	3,750	.71	241.94	0.064
June	5,350	1.01	247.57	0.046
July	15,510	2.94	240.63	0.016
August	18,875	3.57	284.19	0.015
September	5,700	1.08	254.94	0.045
October	12,350	2.34	227.63	0.018
November	16,420	3.11	242.88	0.015
	98,050	18.56	$2311.04	0.024

CONSTRUCTION DIVISION

Contracts for new construction, aggregating in cost over $15,000 each, were completed as follows:

NAME	Area Drained, Acres	Final Cost 5%		REMARKS
		Exclusive	Inclusive	
Long Ave. extension of Holgate St. Sewer.	130	$ 17,599.08	$ 18,437.03	4000′ 27″, 30″ and 33
East 45th St. and Long Ave. Sewer System	60	15,457.05	16,229.90	Lateral System. Drains into Long Ave. Sewer.
Rhine Street Trunk Sewer	1,300	102,085.00	107,189.25	Branch of Brooklyn Trunk Sewer. at Laterals draining into Rhine Street Sewer, providing sewerage for 80 a., constructed.
Willow Street and East 82nd Street Trunk Sewer (an extension of E. Stark Street Sewer)	700	155,175.19	162,933.95	19,000 lineal feet additional laterals provide drainage for 62 acres.

BUREAU OF SURVEYS AND DRAFTING

ORGANIZATION

The organization of this bureau remained as in 1914.

SURVEY DIVISION

This division handles all survey work for the department except that concerned with the construction of sewers and undertakes the routine work embraced in the marking of grades and lines for street improvements, extensions and general surveys, and general surveys in connection with major improvements and with special investigations. The routine work is divided among three sections or districts, one being on the west side of the Willamette River and the others on the east side, each district being supervised by a district surveyor in charge of the field parties delegated to the district. It is difficult to measure the amount of survey work undertaken, but the following table will, in general, indicate its character and extent:

WORK DONE BY DISTRICT SURVEY PARTIES DURING 1915

Nature of work	Length in Miles
Cross-sections	42.20
Grading stakes	24.70
Finishing stakes for grading	9.25
Sidewalk line and grade stakes	39.65
Gutter points for pavement	29.74
Profile levels	20.90
Street extension surveys	28.54
Looking up points for and retracing street lines	132.75
Surveys for placing of (a) monuments; (b) iron pipes	25.12
Miscellaneous survey work	28.61
Measuring up contract work done	21.62
General levels	13.40
Precise levels	3.75
Resurveys	16.53
Stadia topography	1.53
Subgrade points set	2.06
Traverse line	46.00

This work is independent of special surveys ordered and mentioned further on, for which special allowances were made.

The more important surveys undertaken were:

1. A general survey of Patton Road from Mt. Zion crossroads to the junction of Broadway and Grant Street, comprehending the retracing of the entire roadway for a distance of 10,300 feet. Much difficulty was encountered in this work because of encroachment of private owners upon the established roadway of 60 feet. The work was ordered because of an attempt on the part of certain persons to have the road taken over as a city street.

2. A survey of Montgomery Drive from the west line of Lents Addition to Patton Road. In this case, also, there was much confusion regarding lines and an elaborate survey was completed which should be the basis for improvement if the roadway were taken over by the City. Much opposition to this transfer has been developed and the easterly portion of the road, only, was transferred to the custody of the City, to permit a private owner to undertake an improvement, which would give him access to his property.

3. A survey for a new street running diagonally from the intersection of Custer and Front Streets to the intersections of Third and

Mill Streets. The object of this survey was to locate a street which would permit of the elimination of two dangerous railroad crossings in this vicinity. This survey has been made the basis for the design of structures to eliminate these crossings.

4. A survey to retrace the western city boundary. In this work about 17.5 miles of line, both random and corrected, were run. There remains incomplete a section of about two and a half miles at the extreme northwesterly end of the city, which limits the area incorporated with the town of Linnton.

5. A survey for a revision of lines of the proposed Greeley Street extension. The revised lines were staked in the field in order that those interested in the extension might advise themselves of the proposed work.

6. Various surveys on the east side of the river to retrace street and addition lines preliminary to the establishment of monuments in the section bounded by Prescott Street, Killingsworth Avenue, Union Avenue and Commercial Street, and for the retracing of certain section lines northward and southward of East Stark Street. This work may be viewed in a measure as routine work, although its effect is general.

Bench Level Survey—This survey, begun in 1914 for the purpose of covering the entire city with precise working benches, has now been completed. In the 1914 report the methods and results of the survey were described, but since the work mentioned in the 1914 report, the entire West Side, some detached areas on the East Side and all of the area of the former city of St. Johns, have been covered by the level nets. Approximately 140 miles of levels were run during the year. The points set in the year were:

Class A and Class B tablets	246
Class A iron pipe B.M's	62
Class B iron pipe B.M's	17
Street monument B.M's	9
Class C benchmarks	90
Total	424

A number of the old city benchmarks were also redetermined during the progress of the survey and checks made to the benchmarks of the United States Geological Survey. All the field work was carefully adjusted and the complete tabulation of benchmarks comprehending a description and elevation of 2,006 benchmarks established and checked, has been prepared. Of these, 1,273 are listed in numerical order, the points being bronze castings stamped with a die. The cost of the year's work has been:

Salaries of field men	$1,902.05
Salaries of office men in checking, adjustments, distribution of errors, tabulation, etc.	848.80
Bronze tablet benchmarks (Classes A and B)	79.70
Transportation of materials	13.25
Car fare	38.60
Miscellaneous expense	6.00
Total	$2,888.40

Adding to this amount the expenditures for the preceding year ($5,323.31), the total cost of the survey has been $8,211.71. If from this

be deducted the value of equipment and materials on hand—approximately $400.00—the cost per benchmark has been about $3.90. In view of the permanency of the work, this expenditure has been extremely modest and far below what has been accomplished elsewhere. In most other places the benchmarks have not generally been available as a working system, but in Portland the whole thought was to make the survey thoroughly serviceable for ordinary field work.

Street Monument Survey—This survey has been extended on the west side of the river northward from Burnside Street and included the area as far westward as Twenty-seventh Street. Monuments have not been set in this section, but substantial points which will serve to locate the permanent monuments later, have been set. Accurate determination of the position of existing monuments which, in many cases, had become shifted through settlement, blows of traffic or paving operations, was made during the survey. Extreme care was taken in the determination of distances and angles, and every element adjusted in accordance with good practice. In the unmonumented district northward of Raleigh Street, the street and addition lines were retraced and adjusted and permanent iron pipes located at control points, which will serve later as a basis for setting the permanent monuments. Following is a statement of the work actually accomplished:

Distance measured, in feet	158,430
Distance checked, in feet	40,430
Range lines run, in feet	198,480
Range lines checked, in feet	123,660
Number of points set	2,190
Angles measured	558
Old monuments cleaned out and examined	97
Number of permanent points of iron pipe or rod established	25

Underground Survey—The need of a system of underground maps has been very evident for several years but funds have usually been lacking to prosecute the work. In 1913 some work was started but laid aside because of insufficient funds. In 1914 practically no work was done and in 1915 only the necessary field work for the location of surface structures was possible. Much of the information exists in the form of unplotted notes which should be at once entered on the plans. It is purposed to reopen the work and to extend it in 1916.

STREET EXTENSION DIVISION

This division is charged with all matters touching the opening, widening and extension of streets, and the preparation of deeds of dedication, rights of way and similar matters relating to public improvements and public property. The following tabulation indicates the extent of these operations:

STREETS OPENED, LAID OUT AND ESTABLISHED BY EXTENSION PROCEEDINGS

Name of Street	Limits	Length in feet	
	BY ORDINARY METHOD		Res. No.
Union Avenue...	South line of Clinton St. South...	50	8411
54th Street S. E..	42nd Ave. to 44th Ave. S. E.....	333	8503
East 13th St.....	Rural Ave. to E. 14th St. at Bybee Ave.	325	8504
		708	
	BY ADDITIONAL METHOD		Ord. No. initiating
East Grant St....	E. 34th St. to Chestnut Hill.....	300	28625
Broadway.....	At Wheeler Street.....	80	29390
Broadway	Sandy Blvd. to East 45th St.....	1350	28607
East Morrison St.	East 20th street east 155 feet.....	155	29527
Mill St.	16th street to 110 feet west.....	110	28464
		1995	
	BY TAKING OVER COUNTY ROADS		Ord. No.
East 59th St.....	Halsey St. to Sandy Blvd.....	3350	30552
Front Street.....	Wilson St. to north terminus.....	2420	30584
Nicolai Street....	Front St. to Sherlock Ave.....	250	30582
Nicolai Street....	26th St. to 31st St.....	2290	30583
E. 28th Street....	Holgate St. to Schiller St.....	725	30551
E. 17th Street....	Sherrett Ave. to south line of city..	990	30811
Tacoma Avenue.	Grand Ave. to east line East 19th St.	4000	31073
E. Taylor St.....	South of blk. "W," Tabor Heights..	800	30864
Montgomery Dr..	W. L. Lents Add. to lot 16, Alta Vista	525	31030
Halsey St.....	E. 60th St. to point east of O.-W. R. & N.....	5500	31018
East 82d St.....	Clackamas St. to Broadway.....	750	31017
		21,600	
	STREETS OPENED OR WIDENED BY DEED WITHOUT EXTENSION PROCEEDINGS		Ord. No. accepting
Bryant St.....	West line blk. 6, Lowell to Woodlawn	200	30499
East 59th St.....	Halsey St. to Syndicate Addition...	633	30009
94th St. S. E.....	Cherine Add. to 115 ft. south.....	115	30569
95th St. S. E.....	Cherine Add. to 115 ft. south.....	115	30569
96th St. S. E.....	Cherine Add. to 115 ft. south.....	115	30569
66th St. S. E.....	26th Ave. to Section Line Road....	450	30730
East 10th St.....	Taggart St. to Milwaukie St.....	420	29181
79th St. S. E.....	36th Ave. S. E. to 45th Ave. S. E..	2150	29099
East 74th St.....	Over O.-W. R. & N. Co.'s right-of-way	100	30853
		4198	
	PROCEEDINGS ARE PENDING FOR THE EXTENSION, WIDENING OR OPENING OF THE FOLLOWING STREETS AT THE END OF 1915		Order No. initiating
Powell St.	Milwaukie St. to East 19th St.....	1925	39957
Washington St...	Lownsdale St. to 16th St.....	200	30367
East 45th St.....	Halsey St. to Broadway.....	465	30534
58th St. S. E.....	29th Ave. S. E. to Division St.....	1360	30432
Greeley St.....	Killingsworth Ave. to Russell St.....	9810	30788
Madrona St.....	Blk. 1, Woodlawn to Dekum Ave...	600	30815
E. Burnside St...	E. 44th St. to E. 55th St.....	2420	30910

STREETS OPENED, LAID OUT AND ESTABLISHED BY EXTENSION PROCEEDINGS—(Continued)

Name of Street	Limits	Length in feet	
E. Burnside St. and Gilham Ave.	E. 63d St. to E. 69th St. and Thorburn Ave.	1825	30909
Oregon St.	East line of York to east line East 29th St.	91	31125
Kline St.	Patton Road, southeast to S. L. Sec. 4	300	Res. 8933
Halsey St.	Through block 31, McMillen's Add.	97	8123
		19,088	

Among the more important works were the following:

1. The preparation of deeds and other instruments connected with the opening of Greeley Street. All documents related to this important project have been prepared and are ready for accomplishment.

2. The replatting of the area included in Hudson's Addition, Meadow Park, Fairview Addition, a portion of the Town of Wayne and a portion of Quinn's Addition to the Town of Wayne. This district, embracing about 40 acres northward of Knott Street and westward of East Thirty-third Street, was platted at various times in such an indifferent manner that the City consistently refused to consider any public improvements to the property. Streets were located in an amazing manner, a condition arising from the selfish desire of owners to secure as many lots as possible from their holdings, regardless of appearance, convenience or economy. A plan was devised for the replatting, in a single operation, of the entire area, which, briefly, may be described as follows:

The owners in the area would deed their holdings to a trustee and, after all such holdings had been so deeded, an area equivalent to his individual holdings would be re-allotted. With one or two exceptions, all of the 43 property-owners interested have assented to the replat and there is hope that the scheme will have a happy outcome. From the unallotted areas coming from the surplus of street area, the trustee and the City of Portland would find their returns for their efforts and for the expense of the proceedings. The scheme appears to offer a rational solution of an extremely complicated matter.

A similar plan is under consideration for the relocation of streets in the addition, known as "The Cove," located in the hill section in South Portland above Terwilliger Boulevard. This is a less important and less complicated case and probably will also be successful.

Street Acquirement Maps—There had never existed in workable form a record of the procedures by which street areas had been acquired and, after full consideration of the case, it was determined to construct maps which by color and notation would set forth the history of every street acquired by the City. For the formation of these maps it was necessary to make careful search of all records in the department and at the County Clerk's office and after collection of the data maps have now been prepared upon which, in convenient form, are recorded all essential facts touching the acquirement of streets. The maps show the complete history of each street so that if an area be affected by two or three proceedings it is possible, without reference

to any other record, to have a full memorandum. To increase the usefulness of the maps, the ownerships in fee of the City will be indicated on the maps. Constant use is being made of these maps and in the future will serve as a valuable asset to the City. It is believed that this scheme of record is the first attempt of the kind in any large city.

City Map—The City has never owned an adequate city map. Its records exist in the form of disjointed sheets from which no adequate idea of a general improvement may be drawn and dependence must be placed upon more or less indifferent maps prepared by private persons, which the City itself must purchase. For several years the matter of making an accurate city map of general service has been urged, but the expense has not seemed justified, although the wisdom of preparing such a map must be evident. As a basis for this map, it will be necessary to make a triangulation survey of the city. Probably the expense of an accurate map would exceed $50,000.00, but, in my opinion, this expenditure will be amply repaid by the wide general use which the map will find.

DRAFTING DIVISION

The activities of this division are quite varied, it being the general drafting and computing agency of the department. In addition to the ordinary drafting work imposed upon similar organizations, it is charged with the preparation of preliminary etsimates for street improvements and final estimates for both sewer and street improvements, the standardization of printed forms and documents, general statistical data regarding improvements and the finances of the city and a variety of other duties more or less related to computing and drafting. A statement of precise work accomplished is impossible and would not be enlightening, but attention is again called to the exceptional service performed by Mr. Kratz, Chief Draughtsman, as Secretary of the Forms Committee of the Council, who has continued his excellent work on revision and editing of all printed forms, securing both economy and simplicity.

LENGTH AND MATERIALS OF ROADWAY IN PLACE DEC. 1, 1915.

Kind of Improvement	In Place Dec. 1,1914, Length in Miles	In St. Johns andLinnt'n at Time of Annexation	Completed During F.Y. 1915	In Place Dec. 1, 1915
Asphalt	107.27	.....	.304	107.574
Asphaltic Concrete	12.12	.....	7.054	19.174
Asphaltic Concrete Redress	4.45	.....	.....	4.45
Bitulithic	108.35	.09	1.542	109.982
Bitulithic Redress	5.31	.....	.58	5.89
Bituminous Macadam	.15	.....	.....	.15
Concrete	22.11	2.35	1.987	26.447
Granitoid	.37	.....	.....	.37
Gravel Bitulithic	35.16	.....	2.235	37.395
Hassam	46.83	.....	.933	47.763
Stone Blocks	9.16	.....	.227	9.387
Vitrified Brick	.70	.....	.612	1.312
Westrumite	1.00	.58	.....	1.58
Wood Blocks	2.29	.....	.....	2.29
Total Hard Surface	355.27	3.02	15.474	373.764
Elevated roadways	.54	.....	.....	.54
Graded (earth grade)	255.15	12.67	14.506	282.326
Gravel	83.19	.....	.....	83.19
Macadam	46.03	9.39	1.075	56.495
Plank roadway	.80	.....	.....	.80
Reinforced concrete bridge	.16	.....	.....	.16
Steel Bridge	.37	.....	.....	.37
Total Miscellaneous	386.24	21.02	15.581	423.881
Grand Total	741.51	24.04	31.055	797.645

CUMULATIVE COST OF STREET IMPROVEMENTS

Cost of street improvements (Dec. 1, 1914, to Dec. 1, 1915)	$722,387.49
Total cost of street improvements (1865 to Dec. 1, 1914,) before annexation of Linnton and St. Johns	30,658,062.00
Total cost of street improvements in Linnton and St. Johns prior to annexation	440,559.95
Total cost of street improvements (1865 to Dec. 1, 1915)	31,821,009.44

STREET IMPROVEMENT WORK DONE DURING FISCAL YEAR 1915.

Kind of Improvement	Length in Miles	Total Cost including 5% for Eng., Adv.& Insp.
Asphalt	.304	$ 15,197.12
Asphaltic Concrete on Crushed Rock base	1.793	73,002.01
Asphaltic Concrete on Bit. base	5.261	106,419.30
Bitulithic on Crushed Rock base	1.542	64,387.72
Bitulithic Redress	.58	22,704.90
Concrete	1.987	60,717.00
Gravel Bitulithic	2.235	83,314.50
Hassam, Class "A"	.617	20,967.42
Hassam, Class "B"	.316	8,654.75
Stone Blocks	.227	15,179.71
Vitrified Brick	.612	34,045.11
Total Hard Surface	15.474	$504,589.54
Macadam	1.075	23,910.01
Graded (earth grade)	14.506	193,887.94
Total Miscellaneous	15.581	217,797.95
GRAND TOTAL	31.055	722,387.49

TOTAL AMOUNT OF STREET IMPROVEMENTS ACCEPTED DURING FISCAL YEAR 1915.

MONTH	PAVEMENT		GRADING AND WALKS		MACADAM	
	No.	Cost	No.	Cost	No.	Cost
December	1	$2,375.02	4	$ 69,003.22	..	.....
January	2	14,233.98	3	9,346.08	2	20,089.84
February	2	19,454.36	2	12,403.22	1	1,541.00
March	1	19,452.00	..	.....	..	.....
April	..	.....	1	3,525.38	..	.....
May	2	18,430.53	3	12,413.10	..	.....
June	5	21,306.93	13	29,885.63	..	.....
July	5	56,621.65	5	11,940.10	..	.....
August	12	86,147.10	6	15,701.58	1	2,279.17
September	10	141,636.03	3	6,433.27	..	.....
October	6	83,272.58	5	12,414.60	..	.....
November	7	41,659.31	5	10,821.76	..	.....
Total	53	$504,589.54	50	$193,887.94	4	$23,910.01

Total, three classes, $722,387.49.
Note.—This is contract price plus 5%, and includes Grand Avenue permit work ($4,103.40).

CONTRACTS FOR STREET IMPROVEMENTS AWARDED DURING THE FISCAL YEAR 1915.

MONTH	PAVEMENT		GRADING AND SIDEWALK		MACADAM	
	No.	Contract Price by Preliminary Est.	No.	Contract Price by Preliminary Est.	No.	Contract Price by Preliminary Est.
December	2	36,273.00	1	3,500.00	1	1,789.00
January	..	.....	1	7,871.00	..	.....
February	1	15,469.00	2	7,974.00	..	.....
March	4	19,411.00	7	15,730.00	..	.....
April	2	23,524.00	9	19,935.00	1	2,249.00
May	7	60,218.00	1	1,275.00	..	.....
June	11	102,130.00	7	21,473.00	1	9,887.00
July	4	33,915.00	2	1,252.00	..	.....
August	3	27,805.00	6	10,245.00	..	5,817.00
September	3	44,207.00	3	3,833.00	..	.....
October	13	83,030.00	1	930.00	1	5,225.00
November	2	8,664.00	3	10,122.00	1	3,835.00
Total	52	454,646.00	43	104,140.00	5	28,802.00

Total in contracts awarded, $587,588.00.

UNIT PRICES FOR PAVING FOR FISCAL YEAR 1915

KIND	Square Yards	UNIT PRICE			Remarks
		Maximum	Minimum	Average	
Asphalt	4,284.8	1.60	1.48	1.54	
Asphaltic Concrete on Cr. Rk. base	48,101.4	1.30	1.07	1.29	
Asphaltic Concrete on Bituminous base	87,127.1	1.17	1.00	1.12	
Bitulithic on Crushed Rock base	26,089.0	1.85	1.37	1.59	
Bitulithic Redress	15,826.7	1.25	1.12	1.18	
Concrete	30,460.9	1.50	.90	1.21	Bid of 90c.
Gravel Bitulithic	35,565.9	1.45	1.32	1.38	was for in-
Hassam, Class "A"	12,555.4	1.40	1.40	1.40	ferior conc
Hassam, Class "B"	5,396.9	1.30	1.20	1.27	under St. J.
Stone Blocks	800.0	2.90	2.90	2.90	specificat'ns
Vitrified Brick	7,140.5	2.85	2.22	2.53	
Total Hard Surface	273,348.6				
Macadam	4,896.4	3.00	2.50	2.65	Unit price given per cu. yd. for Macadam.
Portion in Track—					
Stone Blocks	3,546.5	3.50	2.75	3.18	
Vitrified Brick	5,470.5	2.00	2.00	2.00	
Concrete	62.0	2.00	2.00	2.00	
Total	9,079.0				
Portion in Central Strip—					
Vitrified Brick	1,129.9	3.00	2.75	2.94	
GRAND TOTAL	288,453.9				

COMPUTERS' WORK ON STREET AND SEWER ESTIMATES FOR FISCAL YEAR 1915

NATURE	PRELIMINARY			FINAL		
	No.	Total Est. Const. Cost	Mileage	No.	Final Cost Plus 5%	Mileage
Street Improvement—						
Preliminary Estimates	94	678,425.00	20.4	.....	.....	.....
Preliminary Permits	2	4,684.70	0.2	1	4,103.40	.075
Final Estimates	.....	.....	.....	106	718,284.09	30.980
Sewer Improvements—						
Final Estimates	.....	.....	.....	43	209,749.85	25.8

STREET IMPROVEMENT PROCEEDINGS DEFEATED BY REMONSTRANCE DURING FISCAL YEAR 1915

DURING FIRST SIX MONTHS				DURING SECOND SIX MONTHS			
Kind of Improvements	No.	Estimated Const. Cost	5% for Eng., etc.	Kind of Improvements	No.	Estimated Const. Cost	5% for Eng., etc.
Grad'g and walks	2	$ 33,828	$ 1,691.00	Grad. and walks.	2	$ 3,273	$ 164.00
Macadam				Macadam	1	3,573	179.00
Pavement	4	15,731	787.00	Pavement	2	2,511	125.00
Total	6	$49,559	$ 2,478.00	Total	5	$9,359	$468.00

One improvement for pavement on which proceedings were discontinued before the completion of the estimate is included with the total number for the first six months, but the estimated contract for cost same is omitted from totals shown.

ANNUAL REPORT

OF

THE DEPARTMENT OF PUBLIC AFFAIRS

FOR THE FISCAL YEAR ENDING
NOVEMBER 30, 1915

DEPARTMENT OF PUBLIC AFFAIRS

WM. L. BREWSTER
COMMISSIONER
To June 30, 1915.

GEO. L. BAKER
July 1 to November 30, 1915.

AUDITORIUM

OFFICE OF CITY ATTORNEY
Walter P. LaRoche, City Attorney

BUREAU OF CITY HALL
C. S. Simmons, Superintendent

BUREAU OF FREE EMPLOYMENT
C. E. Christenson, Superintendent

FREE MUSEUM

BUREAU OF PARKS
James O. Convill, Superintendent

BUREAU OF WEIGHTS AND MEASURES
E. D. Jones, City Sealer

AUDITORIUM

A committee consisting of Messrs. F. C. Knapp, James B. Kerr, H. M. Haller, the Commissioner of Finance and the Commissioner of Public Affairs were appointed to consider the selection of a site for the Auditorium and to propose a type of building to be erected thereon. On February 11th, this committee made a report in which all joined, except the Commissioner of Finance, recommending that, if possible, Block 166, Portland, known as the Dolph Block, and lying diagonally southwest across Fifth Street from the City Hall, be purchased as the site; that the building be constructed primarily for conventions, lectures, concerts and other meetings of a like nature, and only secondarily for exhibition purposes and that provision be made for the Oregon Historical Society until it can obtain permanent quarters in a building of its own.

The Council, however, while concurring in the purpose for which the building should be constructed, declined to follow the report as to the site and confirmed the selection of the Market Block, at Third and Clay Streets, which had previously been selected by the old Public Auditorium Board.

The Council, moreover, were of the opinion that one block 200x200 feet would be sufficient and that it would not be necessary to buy any adjoining property. It will be remembered that the plans drawn for the Market Block site under the direction of the old board were for a plot of ground 200x360 feet. It therefore became necessary to have new plans drawn for the smaller parcel of land determined upon. Mr. Freedlander, the architect, came to Portland and negotiations were had as to the amount of money due him and although an agreement was approached, it finally fell through because Mr. Freedlander stipulated as a condition, that he should have the work of designing the smaller building.

The title of the City to the Market Block, which had been determined favorably to the City by the Circuit Court, and appealed to the Supreme Court, was confirmed by the latter on March 23, 1915.

On May 12, 1915, Messrs. Whitehouse & Fouilhoux were appointed local architects by Messrs. Freedlander & Seymour, of New York.

Immediately upon my assuming office on July 1st, I took up the task of erecting the Auditorium with the least possible delay. Various meetings were held, Messrs. Whitehouse & Fouilhoux, representatives of the architects, being present, and the general plan and arrangement of the building was discussed. Messrs. Whitehouse & Fouilhoux proceeded to make sketches, conforming with the decisions reached, which were completed and submitted to the Council for approval on July 30th. A few minor changes were made, after which the sketches were approved and sent to New York on August 7th, with instructions that preliminary plans should be prepared as soon as possible as we wished to proceed with construction without delay.

The difficulty of hastening the execution of construction in Portland, when all details had to be submitted to the New York architects, was soon apparent, and considerable delay was experienced on this account. While I appreciate that Messrs. Freedlander & Seymour are excellent architects, as efficient and capable as any firm whose services might have been secured, nevertheless I feel that results could

have been obtained more promptly had we been able to work through architects in this city in place of thirty-five hundred miles away.

On October 16th, preliminary working drawings were received from New York, and on November 30th the first set of finished drawings were mailed by the New York architects.

Considerable credit is due Messrs. Whitehouse & Fouilhoux, not only for their thorough and efficient work as representatives of the New York architect, but for their success in facilitating the work of the Eastern office, thereby showing a desire to co-operate with our wishes of hastening the construction.

At the present time the preliminary arrangements have proceeded to such an extent that within the very near future advertisements for bids can be made, the bonds disposed of, and the construction work can proceed without further delay.

ANNUAL REPORT OF THE OFFICE OF THE CITY ATTORNEY, 1915

December 1, 1915.

During the year 1915 there were rendered to the various departments of the City of Portland by the City Attorney's office 894 formal written opinions and 1,260 other official communications, and an average of 15 oral opinions each day by the members of this office.

There were prepared by this office 155 written contracts between the City of Portland and parties transacting business with the City. There have been approved as to form 1,184 contracts and bonds.

The following is a summary of the court work disposed of by this office during the year commencing December 1, 1914, and ending November 30, 1915.

Two cases were disposed of in the United States District Court for the District of Oregon. The case of Schaw Batcher Co. Pipe Works vs. the City of Portland was an action to recover the aggregate sum of $230,628.37 plus interest balance alleged to be due for the construction of the Bull Run Conduit No. 2 and was made up of 11 causes of action. Verdict and judgment in favor of the City in 10 causes of action was entered April 4, 1915, verdict and judgment against the City for the sum of $7,200.00 in one cause of action was entered April 5, 1915, representing the amount of penalty imposed by the City against the contractor. The case of Home Telephone & Telegraph Company vs. City of Portland, a suit to enjoin the enforcement of the electrical wiring ordinance, was compromised during trial.

Nine cases were disposed of in the Supreme Court of Oregon, six of which were decided in favor of the City, two were decided against the City and one was dismissed leaving the judgment of the lower court stand in favor of the City.

Ninety-four cases were disposed of in the Circuit Court of the State of Oregon for the County of Multnomah, 47 were decided in favor of the City, 19 were decided against the City and 28 were dismissed.

One case was disposed of in the Superior Court of the State of California, resulting in a settlement in favor of the Portland Firemens' Relief and Pension Fund.

Two cases were disposed of in the District Court, one of which was decided in favor of the City and one against the City.

There were tried in the Municipal Court during the year 1915 10,088 cases.

At the present time there are pending in the various courts the following number of cases: Three in the District Court of the United States for the District of Oregon; twenty in the Supreme Court of the State of Oregon; one case before the Public Service Commission; seventy-three cases in the Circuit Court of the State of Oregon for Multnomah County; one in the Circuit Court for Clackamas County; one case in the District Court for Multnomah County, and in the County Court for Multnomah County there are pending the following matters: Estate of Ralph H. Stahl, deceased; Estate of Flora E. Stahl, deceased, and Guardianship of the Stahl minors.

The City Attorney was directed by the Council to act as attorney in the above probate matters.

Considerable work has been done during the year 1915 on the cases now pending and many of them are either awaiting decision or are ready for trial.

It has been the constant effort of this office to lessen the amount of litigation by keeping in touch with departmental work so that commissioners and officers of the City could have the benefit of legal advice, and the results show that this effort has met with success—litigation has sharply decreased.

The legal work of the Dock Commission has required steady and prompt attention and the results have been entirely satisfactory.

The field covered by this office has broadened by the enlargement of the city's territory. The annexation of the City of St. Johns and the Town of Linnton brought much additional work to this office.

The organization of the City Attorney's office is closer knit and the various members of the office have worked together with perfect harmony so that any undue strain felt by one or more of its members is relieved by the support of the other members and the work in this way has been promptly dispatched and at all times kept under control.

Respectfully submitted,

W. P. LAROCHE,
City Attorney.

BUREAU OF CITY HALL

Considerable repairing and painting has been done in the City Hall during the past year, particularly in the corridors and on the Fourth Floor. Many requests have been received for additional office space, which is impossible to furnish, and an effort was made to provide additional room by utilizing the gallery of the Council Chamber, which would permit considerable office space, but owing to financial conditions it was not considered advisable to make the changes at the present time.

FREE MUSEUM

Mr. C. F. Wiegand, Curator of the Museum, has secured several interesting exhibits from different sources; a large collection of minerals from Smithsonian Institute adding materially to an already valuable collection.

When the Auditorium is completed and more space provided for the Museum the same can be increased to a far greater extent. The space in the City Hall is so crowded that it does not seem advisable to do so at present.

The Museum is an attraction which brings many visitors to the City Hall who would not otherwise be interested.

BUREAU OF FREE EMPLOYMENT

A total of 5,984 positions were secured during the year, a decrease of 4,038 over the previous year.

The labor depression continued to be very marked and employers could obtain ample help from personal applications made, and did not need to send requests to the Employment Bureau.

During November, 1914, wood cutting camps were opened by the City to give employment to destitute and needy men. The first camp was established at Huber in Washington County and operated from November 20, 1914, to March 1, 1915. Camp No. 2 was opened December 10, 1914, and ran until March 22, 1915. Camp No. 3 was opened January 13, 1915, and ran until April 1. The total number of cords cut at the three camps was 15,103.

Over 900 men were given employment during the operations of the camps. The greater part were single men and only a small percentage of married men took advantage of the opportunity to cut wood in these camps. The average number of days that each man was employed was thirteen. The men were paid from 90 to 95 cents per cord, and cut an average of one and a half cords per man per day. The men were charged 75 cents per day for board, three meals, and in two of the camps $1.00 per week for tools furnished by the City.

The total net money paid in wages for the cutting of the wood was $6,462.58; that amount representing the sum paid to the men after deductions had been made for their meals and use of tools. The total sum expended for all purposes, including the stumpage price, amounted to $33,253.83.

The success that the City Employment Office attained in selecting and handling the men engaged in the above wood cutting, showed to some considerable conclusion, that it should take an active part in all similar work in connection with the unemployed of the city. Having this fact in view, steps were taken early in the Fall of 1915 to reorganize and enlarge the scope of the work of the bureau.

A Citizens' Committee was appointed to co-operate in drafting new measures and outlining new work, consisting of the following: George L. Baker, Chairman; Chas. F. Berg, H. L. Corbett, Rev. W. T. Sumner, Isaac Swett, Eugene Smith, W. P. Strandborg, Father E. V. O'Hara, Marshall N. Dana and J. H. Barbour, which resulted in an ordinance being passed November 24, 1915, creating the Public Employment Bureau, and establishing the office of a Director, and an Assistant Director to manage same. Sub-committees were organized to investigate the advisability of establishing a municipal lodging house, also census committee and committee on Free Employment Bureau.

Mr. J. H. Barbour, United States Immigration Agent, represented the Federal Government, the co-operation of which was assured the Committee, and with this in view, Mr. Barbour made a trip of investigation to Los Angeles, where one of the most successful employment bureaus of the country is being conducted.

Commodious quarters were secured for the Public Employment Bureau, which were thoroughly equipped to handle the work. Arrangements were consummated whereby the United States Government Employment Office was to occupy quarters with the Employment Bureau.

To further cope with the unemployed situation, a municipal lodging

house was established, having a capacity to properly house and sleep over six hundred men. Ample bathing, clothes-washing, and reading room facilities were provided, and at the close of the fiscal year the lodging house was being remodeled and equipped for the purposes named, and the management of the new created Employment Bureau were placed in charge of their work.

NOTE—The figures given above were taken from the pamphlet, "Report on the Problem of Unemployed," by Wm. L. Brewster.

EMPLOYMENT FURNISHED

1915	MALE		FEMALE		Total
	In City	Out of City	In City	Out of City	
December (1914)	*256	*149	*75	*18	*498
January	174	355	68	5	602
February	219	163	59	12	453
March	381	210	69	11	671
April	313	34	71	17	435
May	208	28	70	31	337
June	270	37	93	24	424
July	270	28	75	12	385
August	617	74	83	10	784
September	418	38	104	18	578
October	344	37	72	12	465
November	*242	*22	*81	*7	*352
Total	3,712	1,175	920	177	5,984

*Approximated.

MALE HELP

Following is classification of employment secured and number of employees sent thereto during the months of January, February, March, April, May, June, July, August, September, and October, 1915:

Apprentices	4	Janitors	18
Artist models	2	Kitchen helpers	45
Bakers	3	Laborers:	
Bannermen	14	City	626
Barnmen	1	Common	2317
Berry pickers	23	Lathers	1
Blacksmiths	2	Land clearers	26
Boilermakers	1	Lumber pilers	3
Bricklayers	3	Longshoremen	21
Building laborers	18	Machinists	2
Cabinet makers	1	Meat cutters	1
Carpenters	100	Mill men	7
Cement finishers	13	Painters	51
Concrete muckers	155	Paper hangers	18
Cooks	21	Plasterers	10
Dairy men	16	Plumbers	5
Deck hands	2	Polishers	1
Egg candlers	1	Porters	4
Electricians	1	Potato diggers	11
Elevator operators	2	Shinglers	12
Engineers	3	Steam fitters	3
Errand boys	3	Saw filer	1
Farm hands	121	Teamsters	17
Firemen	2	Tie cutters	3
Flunkies	2	Tree trimmers	1
Gardeners	60	Waiters	5
Hop pickers	71	Wood choppers	53
House men	311		

Following is classification of employment secured and estimated number of employees sent thereto during the months of December, 1914, and November, 1915:

Building laborers	14	Kitchen help	7
Carpenters	12	Land cleaners	5
Cement finishers	8	Lathers	2
Concrete muckers	14	Laborers:	
Cooks	5	City	330
Diarymen	4	Common	200
Electricians	1	Painters	4
Farm hands	9	Plasterers	2
Gardeners	3	Teamsters	3
House men	29	Waiters	3
Janitors	2	Wood choppers	12

FEMALE HELP

Following is classification of employment secured and number of employees sent thereto during months of January, February, March, April, May, June, July, August, September, and October, 1915:

Artist models	2	Housekeepers	72
Berry pickers	20	Janitresses	2
Companions	2	Kitchen help	32
Cannery workers	9	Laundresses	2
Clerks	2	Nurses	8
Chambermaids	31	Nurse girls	7
Cooks	59	Pantry girls	2
Copyist	1	Pressers	1
Day workers	344	Seamstresses	9
Demonstrators	1	Solicitors	3
Domestics	250	Stenographers	2
Factory workers	15	Waitresses	40

Following is classification of employment secured and estimated number of employees sent thereto during the months of December, 1914, and November, 1915:

Attendants	5	Janitresses	5
Chambermaids	10	Kitchen help	10
Cooks	8	Laundresses	1
Day workers	58	Nurses	5
Domestics	39	Nurse girls	7
Factory workers	10	Seamstresses	2
Housekeepers	15	Waitresses	6

BUREAU OF PARKS

PARKS

This report embraces a complete financial statement, also attendance reports of all playgrounds, band concerts, recreation buildings at Peninsula Park and public comfort stations. This financial report is the first prepared under our new cost keeping system, which, I think is as complete as any in use in any of the modern park bureaus. The attendance reports are chiefly of value in that they give some idea of the services rendered, but cannot be taken as absolutely accurate. I believe, however, that they are underestimated rather than overestimated.

From the standpoint of services given the year of 1915 in the Portland parks was very successful and increased interest was manifested by all classes of citizens, and playground attendance in the regular playgrounds was most gratifying. The attendance at band concerts was enormous, and the number of visitors in all parks increased.

The funds for 1915 were smaller than in many years, due to the fact that complete distribution of bond moneys had been made the preceding year. It was hoped and anticipated that more money would be available, due to the showing made, but such, in the judgment of the Council was not advisable and the outlook for continued good service is not bright at this time.

SUMMARIZING FINANCIAL STATEMENT

$152,323.68	was spent on the maintenance and improvement of the parks, on the Zoo, on street trees, band music, etc.
36,781.90	was expended for instructors, for maintenance and improvements of playgrounds.
1,695.77	stock on hand December 1, 1915.
$190,801.35	grand total for year.

The maintenance distribution of moneys is so complete that reference may be made direct to the distribution sheets, and while the same is true regarding permanent improvement, the more important expenditures will be pointed out so that their relation to the entire scheme may be understood.

At Columbia Park the graveling of the walks was completed and the lighting system was installed. A concession building was erected and a small addition made to the greenhouse. The walks are not complete except for rolling, oiling and sanding. A small five-ton gas roller will be necessary to complete the park walks here, and since the Bureau of Parks has some fifteen miles of walks to maintain, the purchase of such a roller is recommended. The gas type is selected as the steam roller injured too much valuable shrubbery. The original plans for Columbia Park are complete except for a permanent band stand. I would recommend that this be held up for two or more years as the temporary stand will serve for at least that time, and the location of a permanent stand requires more growth of the linden trees. A dressing room for the ball players is desirable and a combination dressing room and comfort station has been designed for the north end of the promenade. It is hoped that such a building can be erected next year. The greenhouse in this park is the only one the Bureau of Parks has, and the piles of fertilizer and compost are proving very

offensive to the neighborhood; therefore, this greenhouse should be removed in the very near future.

At Firland Station, on the Mt. Scott line, the Bureau of Parks has control of the central parking strip for some four blocks. Seventy-second Street is an unpaved street and there are no curbs about the parking, nor does it contain any water connections. Trees have been planted but nothing else attempted. Some of the more progressive property owners keep up an agitation for better maintenance, which is impossible until water service is established. This is recommended at an early date. It is further recommended that no more center parkings be accepted unless water services are provided simultaneously with the street grading or improvement.

At the Forestry Building the City owns two acres of ground. None of the adjacent property has been occupied, except by the old Lewis & Clark Centennial buildings, and during the year one of these was totally destroyed by fire. Only by heroic efforts was the Fire Bureau able to save the Forestry Building. In a way, the fire was most fortunate, however, as the owners of the remaining nearby buildings were then prevailed upon to tear them down, and eighteen acres of adjacent land was turned over to the Bureau of Parks for playground purposes. This makes a beautiful twenty-acre park, and makes it possible to move the Lakeview playground from the Incinerator to this more healthful location. During the year, drinking fountains have been installed.

The planting of Hillside Parkway was completed during the year, and while many of the shrubs will die during the hot summer months, it is expected that enough plants will live to cover the embankments. The oiled macadam at the north end was carefully redressed during the year and an extension for two years in the permanent paving has been secured from the Oregon-Washington Railroad & Navigation Company.

The regeneration of Holladay Park started during the year. This beautiful tract has lain for many years in the wild state. Late in the year walks were laid and water service and drainage provided. Funds are available for a lighting system during 1916 and when lights and new comfort station facilities are provided the park will be practically complete for some years.

Kenilworth Park was lighted during the year and the girls' playground moved to the east side of the park. New tennis courts were built and proved very popular. The walk system at this park was laid out with the idea of filling the north area. This improvement will probably never be made and a readjustment of walk lines must follow. As soon as these can be made they should be paved.

Laurelhurst Park secured many needed improvements during the year. Most prominent was the paving of the walks, the installation of a lighting system for the entire park, and the erection of a first-class comfort station. Because of its central location the patronage of this park is enormous, culminating in the Jomelli concert, which drew about 32,000 people, the largest crowd ever assembled in a Portland park for a single band concert.

At Mt. Tabor Park funds were too limited to make much of a showing, but things were so shaped that the drives are ready for paving during 1916. A flight of steps was provided from the hill top to Sixty-ninth Street on the north. They proved most acceptable to large numbers of visitors to the hill top.

The area about the bandstand at Peninsula Park was designed for circular brick steps leading to the lawn area, and these were provided, as was the balustrade about the rose garden. There yet remains a pergola on the south side of this garden, exedras at each end, and colonnades at each of the four corners. It is very desirable to finish this garden, as it will reach the height of its glory in the near future. A new barn is needed at this park and much better results can be secured at the community house if outdoor dressing rooms are provided north of the pool.

At Sellwood a concession building was provided and lamp posts erected for a lighting system. Funds were provided for such a system for 1916 and it will be installed. A new community house is needed at this park and cannot be long delayed as the temporary bath house is rapidly falling down.

Washington Park is the oldest of all parks, and but forty acres of the one hundred and one have been improved. New drives have been laid out and plans made for the complete use of the entire area. Small improvements were made during the year, the most important being a new twenty-acre paddock for the elk. Three new elk barns were built, and while they were relatively inexpensive they were much needed and have provided ample quarters for the elk here, which now number seventeen. The Zoo at Washington Park has for some years past been in poor condition. It is not worthy of a city the size of Portland, and should either be abolished or new quarters provided. Two buildings under the present arrangement are heated; one for animals of the monkey type and one for tropical birds. Both of these buildings were formerly used for greenhouses, and it is impossible to properly heat them in the winter time, or to provide proper shade in the summer. The maintenance of the animals under such conditions is out of all proportion. We have developed plans for a complete Zoo, which calls for the expenditure of approximately $12,000 for buildings. Such buildings would be sanitary in every respect, properly heated, and while such a sum would not provide any ornate features they would suffice for a number of years, and the amount of saving possible, due to modern heating, etc., would practically balance the interest on the money so expended. I would recommend that the Council go definitely on record so that we may start on this plan or abolish the Zoo. It is absolutely impossible to continue on our present basis.

COMFORT STATIONS

Prohibition has lead to much speculation concerning the comfort station needs of the City. After careful consideration I would recommend that a comfort station be established in the vicinity of lower Washington Street, in the North Park blocks, and several East Side locations, and that the unsightly station at the Plaza Blocks be removed and replaced with modern buildings.

ELM LEAF BEETLE

During the year the City was visited for the first time by the elm leaf beetle. Great havoc was wrought on the East Side, and while our law did not permit the immediate handling of the situation by the Bureau of Parks the Council later saw fit to give us permission, and while we were extremely late in entering the field, we can report that, in our judgment, the pest was checked and that during 1916 a vigorous campaign will be waged which will practically eradicate the beetle from

this locality. The appearance of this pest has simply focused attention on the street trees of the City. Under the present arrangement the trees in the parking strips are under the control of the abutting property owner, consequently no uniform plan is possible. Many varieties of trees are introduced which are not suitable for this climate. Many of the most magnificent trees are ruined by improper pruning, and altogether the trees of the city are in bad condition. It is recommended that authority be sought whereby the Bureau of Parks can extend supervisory capacity over street trees at least.

BENSON PARK

During the year S. Benson presented the City with beautiful Benson Park. Due to the extremely limited amount of money which the Bureau of Parks had for construction it was not possible for us to do much with this gift. Had it been made to almost any other park system in the United States immediate steps would have been taken to develop this wonderful tract. It embraces approximately four hundred acres, contains two of the most wonderful waterfalls in the country, has three-fourths miles of river beach, and contains more picturesque scenery than any other park with which I am familiar. Lying as it does thirty-two miles from the City on the Columbia River Highway, its maintenance at this time is rather an embarrassment for the Park Bureau. During the year we erected a small comfort station near the Highway at Wahkeena Falls. Plans have been developed in the Park Office of a commodious stone rest room at this point containing ample lounging rooms, comfort stations, etc. The portion lying between the railroad and the beach should be cleared from all underbrush, fallen trees, etc., and an overhead crossing should be built so that automobiles could be driven from the Highway to this picnic ground and there parked. The present comfort station should be moved from its present site on the Highway to this picnic ground as soon as the more commodious building is erected. To properly handle this park the sum of $15,000 should be made immediately available for the construction purposes, and about $5,000 should be thereafter appropriated for maintenance.

PLAYGROUNDS

During the year great activity was manifested in all sections of the City in playground work. It was most unfortunate that the playground needs of the City were not more fully understood before all bond moneys were spent. As the situation now stands, South Portland, North Portland on the West Side, Central East Portland, Alberta, Alameda, Rose City Park, Arleta, Woodstock, Montavilla and St. Johns are without proper play facilities. Three times the City of Portland has been asked for greater funds for park purposes, and three times bond issues have been refused. However, after making a careful canvass of the situation, I believe that the people want playground parks, and I believe that even as stringent as are local financial conditions at this time, if these different districts knew that playground parks would be provided for them they would not object to providing the necessary funds. I therefore recommend that a bill be prepared whereby the people may vote on a millage tax for park purposes. Under our present budget system it is not possible to give the services that the people demand. It is always desirable to have lower taxes, but much of the criticism levied at the Bureau would be averted if

the people themselves voted on the appropriations, under a millage tax system. I therefore earnestly recommend that it be placed on the ballot at the next general election.

SUMMARY

PARK	MAINTENANCE			IMPROVEMENT			Grand Total
	Labor	Material	Total	Labor	Material	Total	
All Parks	$ 7,285.86	5,283.39	12,569.25	3,272.49	488.57	3,761.06	16,330.31
All Comfort Stations	5,656.41	3,646.27	9,302.68	22.39	395.39	417.78	9,720.46
Benson Park	69.87	122.37	192.24	1,120.35	1,308.92	2,429.27	2,621.51
Chapman and Lownsdale Squares	1,859.56	435.54	2,295.10				2,295.10
Columbia Park	6,377.35	889.57	7,266.92	977.22	3,495.62	4,472.84	11,739.76
Firland	3.25		3.25				3.25
Forestry Building	1,538.49	107.66	1,646.15	60.23	44.98	105.21	1,751.36
Street Fountains	545.15	142.11	687.26	76.87	342.39	419.26	1,106.52
Governor's Park	39.13		39.13				39.13
Hillside Parkway (Terwilliger Boulevard)	2,313.66	2,377.93	4,691.59	1,498.46	966.55	2,465.01	7,156.60
Holladay	795.80	28.12	823.92	682.37	683.62	1,365.99	2,189.91
Kenilworth Park	1,316.22	172.13	1,488.35	392.87	953.48	1,346.35	2,834.70
Ladd's Squares	1,544.68	106.25	1,650.93				1,650.93
Laurelhurst	4,441.92	1,289.24	5,731.16	2,632.21	12,671.60	15,303.81	21,034.97
Macleay	798.30	1.00	799.30	94.30	11.35	105.65	904.95
Mt. Tabor	5,375.03	1,364.36	6,739.39	6,254.99	2,359.71	8,614.70	15,354.09
Office	2,016.82	753.58	2,770.40	15.81	6.00	21.81	2,792.21
North Parkway	1,307.00	44.34	1,351.34				1,351.34
Peninsula	5,842.96	1,720.02	7,562.98	3,155.55	1,486.74	4,642.29	12,205.27
St. Johns	16.64		16.64				16.64
Sellwood	1,763.36	198.87	1,962.23	268.11	462.78	730.89	2,693.12
South Parkway	1,695.18	126.34	1,821.52	96.26	95.06	191.32	2,012.84
Terwilliger	228.88		228.88	84.00	52.95	136.95	365.83
Washington	10,982.64	2,211.41	13,194.05	771.65	10,65	782.30	13,976.35
Music	39.87	9,755.17	9,795.04				9,795.04
Street Trees	872.34	826.18	1,698.52	2.45		2.45	1,700.97
Zoo	3,054.81	4,298.74	7,353.55	174.73	829.09	1,003.82	8,357.37
Miscellaneous	30.33		30.33	65.20	227.62	292.82	323.15
Total Park	67,811.51	35,900.59	103,712.10	21,718.51	26,893.07	48,611.58	152,323.68

SUMMARY—Continued

PLAYGROUNDS	MAINTENANCE			IMPROVEMENT			Grand Total
	Labor	Material	Total	Labor	Material	Total	
All Playgrounds	685.27	977.01	1,662.28	17.52	206.69	224.21	1,886.49
Ainsworth	176.65	8.77	185.42	10.88		10.88	196.30
Arleta	399.62	28.78	428.40	6.00	30.22	36.22	464.62
Brooklyn	1,624.54	184.64	1,809.18	111.74	64.87	176.61	1,985.79
Columbia	808.33	110.95	919.28	251.45	326.04	577.49	1,496.77
Failing	381.46	42.43	423.89				423.89
Kenilworth	663.91	41.39	705.30	130.89	114.79	245.68	950.98
Lakeview	102.32	.85	103.17	75.25	350.00	425.25	528.42
Laurelhurst	508.54	12.29	520.83				520.83
Lents	874.28	456.02	1,330.30	409.36	1,644.72	2,054.08	3,384.38
Lincoln	1,687.11	77.34	1,764.45	456.03	408.38	864.46	2,628.91
Mt. Tabor	277.46	35.73	313.19	1,233.72	1,235.27	2,468.99	2,782.18
North Park	568.96	24.05	593.01				593.01
Peninsula	5,404.51	1,667.83	7,072.34	87.17	129.41	216.58	7,288.92
Reed	365.37	6.45	371.82	22.87	7.84	30.71	402.53
Rose City	170.94	5.83	176.77				176.77
Sellwood	1,555.95	1,352.11	2,903.06	42.01	361.26	403.27	3,311.33
Shaver	181.78	112.15	293.93				293.93
Washington	877.99	60.80	938.79				938.79
Woodstock	14.32		14.32				14.32
School Playgrounds	176.25		176.25				176.25
Multnomah Tank	565.79	92.64	658.43	244.16	1,031.75	1,305.91	1,964.34
Peninsula Annex	270.70	102.85	373.55	82.48	397.30	479.78	853.33
12th and Davis Ball Gr'nd	599.20	79.69	678.89	110.22	1,199.75	1,309.97	1,988.86
Montgomery Tract	381.41	51.47	432.88	261.80	721.31	983.11	1,415.99
57th and 65th Ave				14.25	3.29	17.54	17.54
55th Ave. and 72d St. S. E.				7.13		7.13	7.13
26th and Northrup				14.25	50.75	65.00	65.00
West End					15.00	15.00	15.00
E. 7th and E. 33rd and Fremont Streets				9.30		9.30	9.30
Total, Playgrounds	19,322.66	5,532.07	24,854.73	3,598.53	8,328.64	11,927.17	36,781.90
STOCK							
All Parks		1,695.77	1,695.77				1,695.77

SUMMARY—Continued

TOTALS	MAINTENANCE			IMPROVEMENT			Grand Total
	Labor	Material	Total	Labor	Material	Total	
Parks	67,811.51	35,900.59	103,712.10	21,718.51	26,893.07	48,611.58	152,323.68
Playgrounds	19,322.66	5,532.07	24,854.73	3,598.53	8,328.64	11,927.17	36,781.90
Stock		1,695.77	1,695.77				1,695.77
Grand Totals	87,134.17	43,128.43	130,262.60	25,317.04	35,221.71	60,538.75	190,801.35

DISTRIBUTION OF EXPENDITURES, BUREAU OF PARKS, DECEMBER 1, 1914, TO NOVEMBER 30, 1915

ALL PARKS

	Labor	Material	Total
Maintenance			
Walks, repair	$.....	$ 22.54	$ 22.54
Trees and shrubs (spray)	.....	250.00	250.00
Benches	3.75	177.50	181.25
Light system	.....	.59	.59
Floral display	1.31	105.20	106.51
Equipment	2.25	678.00	680.25
Tools and implements	90.90	202.07	292.97
Toilets, repairs	.....	12.65	12.65
Toilets, supplies	.....	75.64	75.64
Motor vehicles:			
Truck repairs	10.70	283.20	293.90
Truck, gen'l del.	1,164.07	.....	1,164.07
Car 25, repairs	.....	152.95	152.95
Car 36, purchase	.....	515.00	515.00
Car 36, repairs	.....	139.58	139.58
Care of parks	161.00	55.81	216.81
Supervision	2,100.00	27.35	2,127.35
Sundry supplies	100.15	628.65	728.80
Stock (undistributed)	.....	1,956.66	1,956.66
Vacations	3,651.73	.....	3,651.73
	$ 7,285.86	$ 5,283.39	$12,569.25
Improvement			
Engineering and drafting	$ 3,272.49	$ 101.77	$ 3,374.26
Water system, sprinklers	.....	386.80	386.80
	$ 3,272.49	$ 488.57	$ 3,761.06

COMFORT STATIONS

	Labor	Material	Total
Sixth and Yamhill (Women)			
Maintenance			
Care of	$ 1,857.76	$ 41.50	$ 1,899.26
Repairs	35.45	146.89	182.34
Supplies	.....	475.01	475.01
	$ 1,893.21	$ 663.40	$ 2,556.61
Sixth and Yamhill (Men)			
Maintenance			
Care of	$ 1,858.46	$ 4.50	$ 1,862.96
Repairs	9.97	95.60	105.57
Supplies	.....	1,296.34	1,296.34
	$ 1,868.43	$ 1,396.44	$ 3,264.87
Proposed Station, Second and Washington			
Improvement			
Enigneering	$ 3.26	.....	$ 3.26
Chapman and Morrison			
Maintenance			
Care of	$ 16.10	$ 25.20	$ 41.30
Repairs	3.82	4.87	8.69
	$ 19.92	$ 30.07	$ 49.99
Chapman and Morrison			
Improvement			
Construction	$ 19.13	$ 395.39	$ 414.52
Tenth and Yamhill			
Maintenance			
Care of	$ 1,840.13	$ 8.46	$ 1,848.59
Repairs	3.82	.....	3.82
Supplies	.....	334.80	334.80
	$ 1,843.95	$ 343.26	$ 2,187.21
St. Johns			
Maintenance			
Care of	.....	$ 148.72	$ 148.72
Repairs	$ 30.90	14.38	45.28
Rent of Rest Rooms	.....	50.00	50.00
	30.90	$ 213.10	$ 244.00

BENSON PARK

	Labor	Material	Total
Maintenance			
Care of	$ 21.75	$ 79.42	$ 101.17
Picking paper, etc.	20.87	.....	20.87
Labor Day (special)	27.25	42.95	70.20
	$ 69.87	$ 122.37	$ 192.24
Improvement			
Engineering	$ 349.79	$.....	$ 349.79
Clearing	353.56	151.35	504.91
Walks, trails and bridges	43.63	.60	44.23
Sewer system	154.35	176.80	331.15
Water system	164.42	240.81	405.23
Fountain	8.62	15.75	24.37
Benches and tables	5.63	2.55	8.18
Construction comfort station	40.35	721.06	761.41
	$ 1,120.35	$ 1,308.92	$ 2,429.27

CHAPMAN AND LOWNSDALE SQUARES

	Labor	Material	Total
Maintenance			
Watching	$ 21.73	$.....	$ 21.73
Lawn, mowing	170.05	.....	170.05
Lawn, seeding	4.51	.....	4.51
Lawn, picking papers, etc.	116.63	57.00	173.63
Lawn, sprinkling	92.46	.....	92.46
Lawn, raking leaves	158.45	.....	158.45
Lawn, fertilizing	29.84	32.00	61.84
Walks, cleaning	272.46	.....	272.46
Trees and shrubs, pruning, etc.	228.09	.....	228.09
Trees and shrubs, cultivating	10.12	.....	10.12
Trees and shrubs, planting	3.75	1.25	5.00
Trees, cutting down	23.06	.....	23.06
Water system	84.08	33.51	117.59
Fountains, cleaning	25.51	.....	25.51
Fountains, repair	8.31	.....	8.31
Benches	.38	.55	.93
Equipment (monument)	1.87	84.50	86.37
Tools and implements	5.99	93.15	99.14
Comfort stations (repair)	169.63	29.62	199.25
Comfort stations (cleaning)	331.21	77.96	409.17
Care of park	101.43	1.00	102.43
Sundry supplies	.....	25.00	25.00
	$ 1,859.56	$ 435.54	$ 2,295.10

COLUMBIA PARK

	Labor	Material	Total
Maintenance			
Watching	$ 298.75	$.....	$ 298.75
Lawn, mowing	436.03	.....	436.03
Lawn, seeding	21.85	.....	21.85
Lawn, picking paper, etc.	151.16	.....	151.16
Lawn, sprinkling	312.51	.....	312.51
Lawn, raking leaves	172.80	.....	172.80
Walks, repair	23.37	.....	23.37
Walks, cleaning	35.72	.....	35.72
Trees and shrubs, pruning, etc.	87.37	.....	87.37
Trees and shrubs, cultivating	693.68	.....	693.68
Sewers and drains, repair	20.49	15.15	35.64
Water system, repair	11.81	.24	12.05
Fountain, cleaning	5.75	.....	5.75
Benches	177.19	.....	177.19
Floral display	273.33	56.98	330.31
Fence	28.52	24.70	53.22
Tools and implements	11.18	4.52	15.70
Comfort station, repair	21.54	77.13	98.67
Comfort station, cleaning	102.13	32.83	134.96
Stable	4.50	100.78	105.28
Greenhouse	3,413.31	542.05	3,955.36
Care of park	74.36	25.00	99.36
Sundry supplies	.....	10.19	10.19
	$ 6,377.35	$ 889.57	$ 7,266.92
Improvement			
Walks	$ 277.25	$ 391.84	$ 669.09
Trees and shrubs	13.31	42.00	55.31
Water system	144.23	30.09	174.32
Lighting system	234.62	2,464.42	2,699.04
Floral display	51.39	.....	51.39
Concession building, construction	41.06	247.18	288.24
Greenhouse	105.63	234.56	340.19
Engineering	52.36	.....	52.36
Driveway	.....	45.53	45.53
Lawn (parking)	57.37	40.00	97.37
	$ 977.22	$ 3,495.62	$ 4,472.84

FIRLAND

	Labor	Material	Total
Maintenance			
Trees and shrubs, pruning, etc.	$ 3.25	.....	$ 3.25

FORESTRY BUILDING

	Labor	Material	Total
Maintenance			
Lawn, mowing	$ 40.50	$.....	$ 40.50
Benches	7.62	.....	7.62
Floral display	2.75	.....	2.75
Tools and implements	.....	10.00	10.00
Care of building	1,239.17	64.93	1,304.10
Repairs	32.95	16.01	48.96
Treating logs	215.50	16.72	232.22
	$ 1,538.49	$ 107.66	$ 1,646.15
Improvement			
Fountain	$ 60.23	$ 44.98	$ 105.21

FOUNTAINS (Street)

	Labor	Material	Total
Maintenance			
Cleaning	$ 417.95	$ .30	$ 418.25
Repairs	127.20	134.04	261.24
Sundry supplies	.....	7.77	7.77
	$ 545.15	$ 142.11	$ 687.26
Improvement			
New fountains	$ 76.87	$ 342.39	$ 419.26

GOVERNOR'S PARK

	Labor	Material	Total
Maintenance			
Trees and shrubs	$ 12.88	.....	$ 12.88
Care of	26.26	.....	26.25
	$ 39.13	.....	$ 39.13

HILLSDALE PARKWAY (Terwilliger Boulevard)

	Labor	Material	Total
Maintenance			
Watching	$ 118.09	$ 180.00	$ 298.09
Cleaning	344.73	1.69	346.42
Repairs	109.68	2,011.20	2,120.88
Lawn, mowing	221.86	.....	221.86
Picking up papers, etc.	7.13	.....	7.13
Lawn, sprinkling	3.00	.....	3.00
Lawn, raking	21.00	.....	21.00
Lawns, fertilizing	10.69	.....	10.69
Walks, repair	2.62	.....	2.62
Walks, cleaning	61.13	.....	61.13
Trees and shrubs, cultivating	204.45	.....	204.45
Trees and shrubs, cleaning out	12.00	.....	12.00
Shrubs, planting	7.13	.....	7.13
Sewers and drains, cleaning	60.74	.....	60.74
Sewers and drains, repair	109.69	7.74	117.43
Benches	5.54	.....	5.54
Lighting system	5.25	153.30	158.55
Tools and implements	5.32	.....	5.32
Comfort station, repairs	21.59	.....	21.59
Comfort station, care of	26.46	.....	26.46
Care of park	954.56	24.00	978.56
Sundry supplies	1.00	.....	1.00
	$ 2,313.66	$ 2,377.93	$ 4,691.59
Improvement			
Engineering	$ 181.28	$.....	$ 181.28
Clearing and grubbing	152.05	.....	152.05
Lawn	57.57	15.00	72.57
Walks	38.62	791.82	830.44
Trees and shrubs (planting)	1,236.75	.....	1,236.75
Drainage	.....	60.00	60.00
Fountains	10.94	53.49	64.43
Comfort station (lattice, etc.)	2.53	46.24	48.77
	$ 1,498.46	$ 966.55	$ 2,465.01

HOLLADAY PARK

	Labor	Material	Total
Maintenance			
Watching	$ 3.37	$.....	$ 3.37
Lawns, mowing	214.32	.....	214.32
Lawns, picking paper, etc.	59.23	.....	59.23
Lawn, raking leaves, etc.	138.25	.....	138.25
Walks, cleaning	39.88	.....	39.88
Trees and shrubs (pruning, etc.)	58.81	.....	58.81
Trees and shrubs (cultivating)	33.18	.....	33.18
Water system, cleaning fountains	7.61	.....	7.61
Fountain, repairs	36.22	.....	36.22
Benches	30.31	.....	30.31
Light system	.75	11.46	12.21
Floral display	2.70	.....	2.70
Comfort station, repair	12.60	16.47	29.07
Comfort station, cleaning	70.39	.19	70.58
Building, care of (bandstand)	2.38	.....	2.38
Care of park	85.42	.....	85.42
Sundry supplies	.38	.....	.38
	$ 795.80	$ 28.12	$ 823.92
Improvement			
Engineering	$ 12.17	$.....	$ 12.17
Lawn	175.87	.....	175.87
Walks	433.20	552.46	985.66
Water system	61.13	122.16	183.29
Light system	.....	9.00	9.00
	$ 682.37	$ 683.62	$ 1,365.99

KENILWORTH PARK

	Labor	Material	Total
Maintenance			
Watching	$ 240.76	$.....	$ 240.76
Lawns, mowing	246.19	41.50	287.69
Lawn, seeding	21.94	.....	21.94
Lawn, picking paper, etc.	97.51	.....	97.51
Lawn, sprinkling	65.44	.....	65.44
Lawn, raking	103.68	.....	103.68
Lawn, fertiiizing	6.00	.....	6.00
Walks, cleaning	15.00	.....	15.00
Trees and shrubs, pruning, etc.	62.12	.....	62.12
Trees and shrubs, cultivating, etc.	122.25	.....	122.25
Benches	33.01	.....	33.01
Lightnig system	19.86	14.38	34.24
Floral display	31.38	30.55	61.93
Fence	3.00	.....	3.00
Equipment	.....	8.48	8.48
Tools and implements	6.39	.65	7.04
Comfort station, repair	.....	5.97	5.97
Comfort station, cleaning	31.88	.....	31.88
Care of park	209.81	.....	209.81
Sundry supplies	.....	70.60	70.60
	$ 1,316.22	$ 172.13	$ 1,488.35
Improvement			
Engineering	$ 19.55	$.....	$ 19.55
Grubbing and clearing	73.87	.....	73.87
Fountain	6.40	2.30	8.70
Lighting system	288.55	922.43	1,210.98
Grading	4.50	.....	4.50
Tool house	.....	28.75	28.75
	$ 392.87	$ 953.48	$ 1,346.35

LADD'S SQUARES

	Labor	Material	Total
Maintenance			
Lawn, mowing	$ 304.72	$.....	$ 304.72
Lawn, seeding	44.62	.....	44.62
Lawn, picking up paper, etc.	30.12	.....	30.12
Lawn, sprinkling	132.34	.....	132.34
Lawn, raking leaves	2.62	.....	2.62
Lawn, fertilizing	3.00	.....	3.00
Walks, c eaning	38.80	.....	38.80
Trees and shrubs, pruning	41.29	.....	41.29
Trees and shrubs, mulching and spading	286.25	22.00	308.25
Trees and shrubs, planting	41.25	10.00	51.25
Floral display	617.89	10.00	627.89
Implements and tools	1.78	62.25	64.03
Sundry supplies	.....	2.00	2.00
	$ 1,544.68	$ 106.25	$ 1,650.93

LAURELHURST

	Labor	Material	Total
Maintenance			
Jomelli Concert—special	$ 68.44	$ 229.12	$ 297.56
Watching	448.50	.....	448.50
Lawn, cutting	509.10	239.50	748.60
Lawn, resoding and seeding	58.90	.....	58.90
Lawn, picking paper, etc.	302.31	.....	302.31
Lawn, laying	6.00	.....	6.00
Lawn, watering	251.63	.....	251.63
Lawn, raking	1.50	.....	1.50
Lawn, fertilizing	21.00	.....	21.00
Walks, repairing	230.28	.....	230.28
Walks, cleaning	2.74	.....	2.74
Trees and shrubs, pruning, etc.	62.70	4.75	67.45
Trees and shrubs, cultivating	1,058.74	184.00	1,242.74
Trees and shrubs, planting	218.76	.....	218.76
Trees and shrubs, cutting down, etc.	15.00	.....	15.00
Drains, repairing	38.12	6.48	44.60
Water system, repairing	2.35	15.63	17.98
Benches	88.20	6.00	94.20
Light system	4.50	433.16	437.66
Floral display	36.56	115.04	151.60
Tools and implements	18.49	5.68	24.17
Comfort station, repairs	16.95	26.78	43.73
Comfort station, cleaning	13.67	.....	13.67
Stable	1.93	1.25	3.18
Park, care of	409.25	10.80	420.05
Supervising	555.89	1.00	556.89
Sundry supplies	.41	10.05	10.46
	$ 4,441.92	$ 1,289.24	$ 5,731.16
Improvement			
Rock wall	$ 11.25	$ 512.89	$ 524.14
Engineering	269.33	.....	269.33
Engineering, blk. 95	3.55	.....	3.55
Clearing and grubbing	50.63	.....	50.63
Walks	421.61	5,656.29	6,077.90
Lawn	362.12	259.50	621.62
Trees and shrubs, planting	3.50	.....	3.50
Sewer from lake	.....	113.85	113.85
Water system	88.71	45.85	134.56
Fountains	14.19	60.74	74.93
Picnic tables	1.50	.75	2.25
Lighting system	1,185.96	3,080.12	4,266.08
Grading	45.76	.....	45.76
Fence (pipes at entrance)	22.60	30.79	53.39
Comfort station	78.74	2,885.42	2,964.16
Administration buildings	53.26	21.95	75.21
Steps	19.50	3.45	22.95
	$ 2,632.21	$12,671.60	$15,303.81

MACLEAY

	Labor	Material	Total
Maintenance			
Watching	$ 159.76	$.....	$ 159.76
Driveways, cleaning	1.50	.....	1.50
Lawn, cutting	.38	.....	.38
Lawn, picking papers, etc.	75.12	.....	75.12
Raking leaves	27.00	.....	27.00
Bridges, walks, repairing	215.06	.....	215.06
Walks, cleaning	218.00	.....	218.00
Trees and shrubs, cutting	56.69	.....	56.69
Sewers and drains	6.00	.....	6.00
Repairs	.41	.....	.41
Fence	4.50	.....	4.50
Tools and implements	2.13	.....	2.13
Care of park	31.75	1.00	32.75
	$ 798.30	$ 1.00	$ 799.30
Improvement			
Fountain	$ 11.55	$.....	$ 11.55
Bridge	19.00	.80	19.80
Water system	57.00	10.55	67.55
Grading	6.75	.....	6.75
	$ 94.30	$ 11.35	$ 105.65

MT. TABOR

	Labor	Material	Total
Maintenance			
Watching	$ 23.50	$.....	$ 23.50
Driveway, cleaning	97.25	.....	97.25
Roads, cleaning gutters	41.25	.....	41.25
Driveway, repairing	303.91	180.00	483.91
Lawn, mowing	315.43	.....	315.43
Lawn, resoding and seeding	56.00	.....	56.00
Lawn, picking up paper, etc.	89.62	.....	89.62
Lawn, raking	50.13	.....	50.13
Haying	8.25	.....	8.25
Walks, repairing	96.62	.....	96.62
Walks, cleaning	65.88	.....	65.88
Trees and shrubs	201.31	.....	201.31
Trees and shrubs, mulching and spading	351.60	.....	351.60
Trees and shrubs, digging	42.06	.....	42.06
Trees and shrubs, planting	69.68	19.60	89.28
Sewers and drains	43.94	9.90	53.84
Water system, repairing	18.57	1.96	20.53
Benches	67.50	.....	67.50
Light system	15.75	3.00	18.75
Floral display	58.31	.....	58.31
Fence	9.00	.....	9.00
Equipment	.63	63.70	64.33
Tools	84.63	32.02	116.65
Toilet repair	40.95	65.83	106.78
Comfort station, cleaning	4.87	.....	4.87
Stable	253.46	932.24	1,185.70
Buildings, repair of	10.50	5.90	16.40
Nursery	1,845.74	8.15	1,853.89
Park, care of	343.60	24.00	367.60
Supervision	765.09	4.17	769.26
Sundry supplies	.....	13.89	13.89
	$ 5,375.03	$ 1,364.36	$ 6,739.39
Improvement			
Engineering	$ 384.70	$.....	$ 384.70
Clearing greenhouse site	33.00	.....	33.00
Clearing and grubbing	1,054.46	116.00	1,170.46
New roads	332.53	903.37	1,235.90
Lawn	1.50	15.00	16.50
Walks	900.70	.....	900.70
Trees and shrubs	1,397.88	.....	1,397.88
Fountain	11.35	36.53	47.88
Benches and log seats	191.25	.....	191.25
Lamp posts	4.25	396.18	400.43
Grade Main street	3.25	.....	3.25
Grading	135.35	.....	135.35
Toilets	.....	347.43	347.43
Cold frames for nursery	21.12	26.53	47.65
Steps	367.70	518.67	886.37
Warehouse	1,415.95	.....	1,415.95
	$ 6,254.99	$ 2,359.71	$ 8,614.70

OFFICE

	Labor	Material	Total
Maintenance			
Supplies	$.....	$ 562.90	$ 562.90
Equipment	.....	190.68	190.68
Clerical	2,016.82	.....	2,016.82
	$ 2,016.82	$ 753.58	$ 2,770.40
Improvement			
Engineering	$ 15.81	$ 6.00	$ 21.81

NORTH PARKWAY

	Labor	Material	Total
Maintenance			
Watching	$ 3.00	$.....	$ 3.00
Lawn, mowing	296.36	.....	296.36
Lawn, resoding and reseeding	1.50	.....	1.50
Lawn, picking up papers, etc.	119.81	36.00	155.81
Lawn, sprinkling	193.50	.....	193.50
Lawn, raking	199.75	.....	199.75
Lawn, fertilizing	73.52	.....	73.52
Walks, cleaning	22.88	.....	22.88
Trees and shrubs, pruning, etc.	42.38	.....	42.38
Trees and shrubs, cultivating	36.38	.....	36.38
Water supply, repairing pipes, etc.	1.50	.90	2.40
Fountains, cleaning	1.12	.....	1.12
Fountains, repairing	1.50	.92	2.42
Benches	11.53	4.04	15.57
Care tools	3.47	.32	3.79
Comfort station, repairing	3.10	1.66	4.76
Comfort station, cleaning	109.33	.50	109.83
Care of parks	186.37	.....	186.37
	$ 1,307.00	$ 44.34	$ 1,351.34

PENINSULA

	Labor	Material	Total
Maintenance			
Watching	$ 927.31	$.....	$ 927.31
Lawn, mowing	264.19	.....	264.19
Lawn, resoding and seeding	79.49	.....	79.49
Lawn, picking up papers, etc.	280.94	.....	280.94
Lawn, sprinkling	43.58	.....	43.58
Lawn, raking leaves, etc.	49.40	.....	49.40
Walks, cleaning	65.12	.....	65.12
Trees and shrubs, pruning and spraying	38.55	.....	38.55
Trees and shrubs, cultivating	254.07	.....	254.07
Trees and shrubs, planting	11.24	.....	11.24
Sewers and drains, repairing	226.97	39.44	266.41
Water system, repairing	19.32	.....	19.32
Fountains, cleaning	22.99	.....	22.99
Fountains, repairing	16.12	31.96	48.08
Care of benches	108.94	.....	108.94
Light system	13.38	24.94	38.32
Floral display (other than rose garden)	192.33	64.15	256.48
Fence	6.01	.....	6.01
Tools and implements	8.62	10.94	19.56
Comfort station, repairs	22.93	151.79	174.72
Comfort stations, cleaning	113.52	.....	113.52
Stable	14.30	102.38	116.68
Rose garden	1,872.26	1,248.42	3,120.68
Care of grounds	424.16	44.00	468.16
Supervision	767.22	2.00	769.22
	$ 5,842.96	$ 1,720.02	$ 7,562.98
Improvement			
Engineering	$ 61.50	$.....	$ 61.50
Clearing	1.12	.....	1.12
Water system	82.89	529.98	612.87
Light system—Rose garden	109.36	139.76	249.12
Light system—General	271.70	.....	271.70
Bal. and steps—Paving sunken garden	2,628.98	817.00	3,445.98
	$ 3,155.55	$ 1,486.74	$ 4,642.29

ST. JOHNS

	Labor	Material	Total
Maintenance			
City Hall	$ 16.64	.....	$ 16.64

SELLWOOD

	Labor	Material	Total
Maintenance			
Watching	$ 308.98	$.....	$ 308.98
Lawn, mowing	217.10	72.00	289.10
Lawn, resoding and seeding	21.91	.....	21.91
Lawn, picking up papers, etc.	126.59	.....	126.59
Lawn, watering	106.18	.....	106.18
Lawn, raking leaves	31.63	.....	31.63
Walks, repairing	1.62	.....	1.62
Walks, cleaning	46.13	.....	46.13
Trees and shrubbery, pruning	209.24	.....	209.24
Trees and shrubbery, cultivating	123.29	.....	123.29
Cleaning out shrubs	1.62	.....	1.62
Shrubs, planting	1.62	.....	1.62
Catch basins, cleaning	3.00	.....	3.00
Sewers, repairing, etc.	.81	.....	.81
Water supply, repairing pipes, hydrants	4.50	27.23	31.73
Fountains, cleaning	1.94	.....	1.94
Fountains, repairing	11.94	25.84	37.78
Benches	48.42	.....	48.42
Light system	2.25	.....	2.25
Floral display	6.37	21.30	27.67
Fence	5.25	.....	5.25
Tools and implements	7.49	.74	8.23
Comfort station, repairing	2.25	5.00	7.25
Toilets, cleaning	1.43	.....	1.43
Care of building	13.36	1.13	14.49
Building, repairing	27.69	3.73	31.42
Grounds, care of	306.51	25.00	331.51
Supervision	124.24	1.00	125.24
Sundry supplies	.....	15.90	15.90
	$ 1,763.36	$ 198.87	$ 1,962.23
Improvement			
Engineering, Grand Ave. Ext.	$ 1.86	$.....	$ 1.86
Engineering	16.25	.....	16.25
Clearing	.....	71.63	71.63
Sewer	2.25	2.15	4.40
Fountain	3.36	.....	3.36
Light system	8.25	15.00	23.25
Concession building	144.63	165.62	310.25
Lamp standards	91.51	208.38	299.89
	$ 268.11	$ 462.78	$ 730.89

SOUTH PARKWAY

	Labor	Material	Total
Maintenance			
Watching	$ 11.00	$.....	$ 11.00
Lawn, mowing	200.77	.....	200.77
Lawn, seeding	28.13	.....	28.13
Lawn, picking up papers, etc.	397.68	36.00	433.68
Lawn, watering	213.01	.....	213.01
Lawn, raking leaves	316.49	.....	316.49
Lawn, fertilizing	158.95	30.00	188.95
Walks, repairing	40.87	36.00	76.87
Walks, cleaning	17.99	.56	18.55
Trees and shrubs, pruning, etc.	78.00	.....	78.00
Trees and shrubs, mulching and spading	78.75	.....	78.75
Water ssytem, repairing	1.56	.....	1.56
Benches	99.99	10.15	110.14
Light system	.....	4.80	4.80
Fence	7.13	.....	7.13
Tools and implements	1.49	1.48	2.97
Building, grand stand, etc., care of	12.75	.....	12.75
Building, grand stand, repair of	7.50	7.35	14.85
Care of park	23.12	.....	23.12
	$ 1,695.18	$ 126.34	$ 1,821.52
Improvement			
Engineering	$ 5.82	$.....	$ 5.82
Fountains	90.44	95.06	185.50
	$ 96.26	$ 95.06	$ 191.32

TERWILLIGER

	Labor	Material	Total
Maintenance			
Lawn, mowing	$ 81.01	.....	81.01
Lawn, picking up papers, etc.	39.37	.....	39.37
Haying	2.25	.....	2.25
Lawn, sprinkling	2.25	.....	2.25
Lawn, raking leaves	45.38	.....	45.38
Walks, repairing	5.50	.....	5.50
Walks, cleaning	5.25	.....	5.25
Trees and shrubs, pruning	3.00	.....	3.00
Trees and shrubs, cultivating	14.62	.....	14.62
Benches	7.13	.....	7.13
Fence	20.87	.....	20.87
Care of parks	2.25	.....	2.25
	$ 228.88	.....	$ 228.88
Improvement			
Steps	$ 84.00	$ 52.95	$ 136.95

WASHINGTON

	Labor	Material	Total
Maintenance			
Watching	$ 1,367.24	$.....	$ 1,367.24
Roads, cleaning	590.09	.....	590.09
Gutters, cleaning	8.25	.....	8.25
Roads, repairing	567.80	730.24	1,298.04
Lawn, mowing	878.51	.....	878.51
Lawn, resoding and seeding	26.06	.....	26.06
Lawn, picking up papers, etc.	353.59	.....	353.59
Haying	40.44	.....	40.44
Lawn, sprinkling	157.94	.....	157.94
Lawn, raking leaves	381.29	.....	381.29
Lawn fertilizer	12.00	.....	12.00
Walks, bridges, steps, etc., repairing	95.21	15.28	110.49
Walks, cleaning	757.30	.....	757.30
Trees and shrubs, pruning	347.70	.....	347.70
Trees and shrubs, mulching and spading	724.03	.....	724.03
Trees and shrubs, cleaning out	7.96	.....	7.96
Trees and shrubs, planting	247.48	.....	247.48
Trees, cutting, removing	22.50	.....	22.50
Cleaning catch basin	1.60	.....	1.60
Sewers and drains, repairing	43.34	.....	43.34
Water supply	82.26	37.52	119.78
Cleaning fountains	12.37	.....	12.37
Repairing fountains	1.55	.....	1.55
Benches	611.31	.....	611.31
Lighting system	79.68	482.86	562.54
Floral display	813.32	140.57	953.89
Fence	121.03	.....	121.03
Equipment	15.76	19.74	35.50
Tools	95.98	42.13	138.11
Toilet, repairs to	252.70	126.56	379.26
Toilet, cleaning	218.85	14.73	233.58
Stable	56.42	387.85	444.27
Buildings, care of	76.37	.90	77.27
Buildings, repairing	123.38	53.60	176.98
Park, care of	759.20	27.00	786.20
Supervising	1,030.63	39.00	1,069.63
Sundry supplies	1.50	93.43	94.93
	$10,982.64	$ 2,211.41	$13,194.05
Improvement			
Engineering	$ 265.41	$.....	$ 265.41
Clearing and grubbing	100.26	.....	100.26
New roads	143.26	.....	143.26
Rubble wall	223.30	9.00	232.30
Water system	34.08	.....	34.08
Electric signs in toilet	5.34	1.65	6.99
	$ 771.65	$ 10.65	$ 782.30

MUSIC (All Parks)

	Labor	Material	Total
Maintenance			
Music	$ 39.87	$ 9,755.17	$ 9,795.04

STREET TREES

	Labor	Material	Total
Maintenance			
Spraying, special	$ 245.72	$ 699.18	$ 944.90
Spading and watering (Laurelhurst Add.)	107.25	28.00	135.25
Trimming and spraying	190.15	.....	190.15
Trees and shrubs, mulching and cultivating	218.08	99.00	317.08
Planting	88.64	.....	88.64
Trees	22.50	.....	22.50
	$ 872.34	$ 826.18	$ 1,698.52
Engineering			
Map	$ 2.45	.....	$ 2.45

ZOO

	Labor	Material	Total
Maintenance			
Sewers and drains, repair of	$ 1.62	$.....	$ 1.62
Fence	72.33	.....	72.33
Equipment	23.18	133.20	156.38
Care of Zoo	2,825.07	128.18	2,953.25
Care of buildings	13.38	.....	13.38
Repair of buildings	101.99	12.94	114.93
Supplies	17.24	4,024.42	4,041.66
	$ 3,054.81	$ 4,298.74	$ 7,353.55
Improvement			
Buffalo and deer to Spokane	$ 37.37	$ 3.96	$ 41.33
Water trough	12.38	.....	12.38
Fence	.....	135.01	135.01
Animals	.....	21.70	21.70
Elk barns, grade for	110.02	.....	110.02
Elk barns	14.96	668.42	683.38
	$ 174.73	$ 829.09	$ 1,003.82

MISCELLANEOUS

	Labor	Material	Total
Maintenance			
Other departments, men, team and truck	$ 30.33	.....	$ 30.33
Improvement			
Employment bureau and lodging house	$ 5.06	$ 20.49	25.55
Western Hills and Reservation Multnomah Falls, engineering	23.08	.....	23.08
Kelly Butte, engineering	10.78	.....	10.78
Irvington Club, fountain	.....	30.08	30.08
Wood	.....	47.05	47.05
Patton Avenue, grading	.....	110.00	110.00
Overlook, lawn making	7.75	.....	7.75
Trees and shrubs, Overlook	13.50	16.50	30.00
Overlook water system	5.03	3.50	8.53
	$ 65.20	$ 227.62	$ 292.82

ALL PLAYGROUNDS

	Labor	Material	Total
Maintenance			
Watching	$ 96.66	$ 5.00	$ 101.66
Equipment—Apparatus	141.70	549.90	691.60
Supervision	446.91	2.50	449.41
Sundry supplies	.....	419.61	419.61
	$ 685.27	$ 977.01	$ 1,662.28
Improvement			
Engineering	$ 17.52	$.....	$ 17.52
Equipment	.....	206.69	206.69
	$ 17.52	$ 206.69	$ 224.21

AINSWORTH

	Labor	Material	Total
Maintenance			
Supervising playgrund	$ 176.65	$.....	$ 176.65
Sundry supplies	.....	8.77	8.77
	$ 176.65	$ 8.77	$ 185.42
Improvement			
Erecting apparatus	$ 10.88	.....	$ 10.88

ARLETA

	Labor	Material	Total
Maintenance			
Sundry supplies	.....	$ 28.78	$ 28.78
Supervising playgrounds	$ 399.62	.....	399.62
	$ 399.62	$ 28.78	$ 428.40
Improvement			
Grading	$ 6.00	$.....	$ 6.00
Sanding court	.....	30.22	30.22
	$ 6.00	$ 30.22	$ 36.22

BROOKLYN PLAYGROUNDS

	Labor	Material	Total
Maintenance			
Police and watching	$ 101.63	$.....	$ 101.63
Gutters, cleaning	2.44	.....	2.44
Lawn, mowing	50.82	.....	50.82
Lawn, resodding, seeding	3.01	.....	3.01
Lawn, picking up papers, etc.	31.50	.....	31.50
Lawn, sprinkling	91.12	.....	91.12
Lawn, raking leaves	59.25	.....	59.25
Lawn, fertilizing	3.37	.....	3.37
Walks, cleaning	143.42	.....	143.42
Trees and shrubs, pruning, etc.	4.33	.....	4.33
Trees and shrubs, mulching	29.44	.....	29.44
Sewers and drains, repairing	1.13	.....	1.13
Water system, repairing pipes, etc.	28.49	25.69	54.18
Water supply, cleaning fountains	14.23	.....	14.23
Fountains, repairing	1.88	2.07	3.95
Benches	30.19	.....	30.19
Floral display	37.22	.....	37.22
Fence	44.45	43.20	87.65
Equipment—Apparatus	102.41	2.58	104.99
Tools and implements	3.17	1.74	4.91
Toilets, repairing	21.23	12.21	33.44
Toilets, cleaning	150.56	6.62	157.18
Care of park	107.06	6.00	113.06
Supervision playground	562.19	.....	562.19
Sundry supplies	.....	84.53	84.53
	$ 1,624.54	$ 184.64	$ 1,809.18
Improvement			
Fountains	$ 23.64	$ 26.13	$ 49.77
Handball court	88.10	38.74	126.84
	$ 111.74	$ 64.87	$ 176.61

COLUMBIA

	Labor	Material	Total
Maintenance			
Apparatus and equipment	$ 89.76	$ 38.00	$ 127.76
Care of grounds	122.35	.....	122.35
Supervising playgrounds	596.22	.....	596.22
Sundry supplies	.....	72.95	72.95
	$ 808.33	$ 110.95	$ 919.28
Improvement			
Sanding court	$ 20.25	$ 8.58	$ 28.83
Tennis court	76.19	9.41	85.60
Handball court	48.38	73.90	122.28
Wading pool, grading	15.75	.....	15.75
Wading pool	73.01	177.65	250.66
Cess pool	17.87	56.50	74.37
	$ 251.45	$ 326.04	$ 577.49

FAILING

	Labor	Material	Total
Maintenance			
Supervising playground	$ 356.94	$.....	$ 356.94
Sundry supplies	24.52	.....	24.52
Building, repairing	.....	42.43	42.43
	$ 381.46	$ 42.43	$ 423.89

KENILWORTH PLAYGROUND

	Labor	Material	Total
Maintenance			
Valve, repairing	$ 1.62	$.....	$ 1.62
Equipment—Apparatus	135.67	15.76	151.43
Park, care of	21.80	.....	21.80
Supervising, play	504.82	.....	504.82
Sundry supplies	.....	25.63	25.63
	$ 663.91	$ 41.39	$ 705.30
Improvement			
Handball court	$ 44.03	$ 84.56	$ 128.59
Tennis courts	86.86	30.23	117.09
	$ 130.89	$ 114.79	$ 245.68

LAKEVIEW PLAYGROUND

	Labor	Material	Total
Maintenance			
Apparatus—Equipment	$ 25.63	$.....	$ 25.63
Supervising play	76.69	.....	76.69
Sundry supplies	.....	.85	.85
	$ 102.32	$ .85	$ 103.17
Improvement			
Grading	$.....	$ 150.00	$ 150.00
Cleaning	75.25	200.00	275.25
	$ 75.25	$ 350.00	$ 425.25

LAURELHURST PLAYGROUND

	Labor	Material	Total
Maintenance			
Equipment—Apparatus	$ 5.99	$ 4.56	$ 10.55
Supervising play	501.05	.....	501.05
Care of	1.50	.....	1.50
Sundry supplies	.....	7.73	7.73
	$ 508.54	$ 12.29	$ 520.83

LENTS PLAYGROUND

	Labor	Material	Total
Maintenance			
Watching	$ 160.38	$.....	$ 160.38
Lawn, mowing	41.25	.....	41.25
Lawn, picking up papers, etc.	63.38	.....	63.38
Lawn, raking leaves	14.62	.....	14.62
Shrubs, cutting out	1.88	.....	1.88
Trees and shrubs, mulching and cultivating	149.87	.....	149.87
Pipes and hydrants	1.50	.....	1.50
Fountains, cleaning	20.99	.....	20.99
Water supply—Fountains, repairing	7.16	.37	7.53
Benches	12.00	.....	12.00
Fence	13.49	.....	13.49
Equipment—Apparatus	171.78	13.50	185.28
Care of tools	.81	10.22	11.03
Toilet, repairing	1.50	283.22	284.72
Toilet, cleaning	11.06	13.23	24.29
Building, cleaning	20.07	.....	20.07
Buildings, repair of	47.34	46.03	93.37
Park, care of	55.87	67.00	122.87
Supervising play	540.36	.....	540.36
Sundry supplies	.....	22.82	22.82
	$ 874.28	$ 456.02	$ 1,330.30
Improvement			
Engineering	$ 91.51	$.....	$ 91.51
Grading	.....	538.25	538.25
Wading pool	221.53	999.44	1,220.97
Walks about pool	22.13	6.90	29.03
Drains and sewers	16.50	57.00	73.50
Water supply	57.69	38.50	96.19
Handball court	.....	4.63	4.63
	$ 409.36	$ 1,644.72	$ 2,054.08

LINCOLN PLAYGROUND

	Labor	Material	Total
Maintenance			
Watching	$ 171.77	$.....	$ 171.77
Lawn, mowing	27.76	.....	27.76
Lawn, resoding and seeding	2.25	.....	2.25
Lawn, picking up papers, etc.	89.09	.....	89.09
Lawn, watering	5.62	.....	5.62
Lawn, raking	10.88	.....	10.88
Walks, repairing	2.25	.....	2.25
Walks, cleaning	93.11	.....	93.11
Trees and shrubs, pruning	24.75	.....	24.75
Trees and shrubs, mulching and spading	104.26	.....	104.26
Sewers and drains, repairing	18.75	.....	18.75
Fountains, repairing	.75	.....	.75
Fence	1.50	.....	1.50
Apparatus and equipment—Care of	249.29	27.06	276.35
Tools	.....	3.03	3.03
Comfort station, repairs	62.88	23.40	86.28
Comfort station, cleaning	133.89	.....	133.89
Grounds, care of	110.72	.....	110.72
Supervising play	577.59	.....	577.59
Sundry supplies	.....	23.85	23.85
	$ 1,687.11	$ 77.34	$ 1,764.45
Improvement			
Wading pool	$ 237.89	$ 304.62	$ 542.51
Walks	23.62	.....	23.62
Water supply	13.50	.....	13.50
Grading	45.76	.....	45.76
Engineering	3.15	.....	3.15
Handball court	55.12	74.35	129.47
Tool houses	.....	28.75	28.75
Tennis court	77.04	.66	77.70
	$ 456.08	$ 408.38	$ 864.46

MT. TABOR PLAYGROUND

	Labor	Material	Total
Maintenance			
Building, repairs of	$.....	$ 22.09	$ 22.09
Apparatus, erection and care for	42.92	.....	42.92
Playground, care of	9.00	.....	9.00
Supervising play	225.54	.....	225.54
Sundry supplies	.....	13.64	13.64
	$ 277.46	$ 35.73	$ 313.19
Improvement			
Clearing and grubbing	$ 3.00	$.....	$ 3.00
Wading Pool	253.95	481.53	735.48
Wading pool, grading	209.25	.....	209.25
Sewer	347.57	198.62	546.19
Water system	31.12	9.20	40.32
Playground, grading	270.99	16.00	286.99
Tennis court, grading	90.87	.....	90.87
Tennis court	26.97	.....	26.97
Fence	.....	529.92	529.92
	$ 1,233.72	$ 1,235.27	$ 2,468.99

NORTH PARK PLAYGROUND

	Labor	Material	Total
Maintenance			
Playground equipment	$ 32.25	$.....	$ 32.25
Grounds, care of	2.25	.....	2.25
Supervising play	534.46	.....	534.46
Sundry supplies	.....	24.05	24.05
	$ 568.96	$ 24.05	$ 593.01

PENINSULA PLAYGROUND

	Labor	Material	Total
Maintenance			
Fence	$ 12.34	$.....	$ 12.34
Equipment and apparatus, care of	176.32	263.72	440.04
Building, care of	2,998.73	357.48	3,356.21
Recreation building, care of	79.41	68.84	148.25
Swimming pool	948.54	795.27	1,743.81
Care of	36.36	.....	36.36
Supervising play	1,152.81	.....	1,152.81
Sundry supplies	.....	182.52	182.52
	$ 5,404.51	$ 1,667.83	$ 7,072.34
Improvement			
Fence	$ 33.55	$ 52.70	$ 86.25
Hand ball court	53.24	76.71	129.95
Tennis courts	.38	.....	.38
	$ 87.17	$ 129.41	$ 216.58

REED PLAYGROUNDS

	Labor	Material	Total
Maintenance			
Supervision of play	$ 365.37	$.....	$ 365.37
Sundry supplies	.....	6.45	6.45
	$ 365.37	$ 6.45	$ 371.82
Improvement			
Grounds, care of, cleaning up	$ 22.87	$ 7.84	$ 30.71

ROSE CITY

	Labor	Material	Total
Maintenance			
Supervising play	$ 170.94	$.....	$ 170.94
Sundry supplies	.....	5.83	5.83
	$ 170.94	$ 5.83	$ 176.77

SELLWOOD PLAYGROUND

	Labor	Material	Total
Maintenance			
Picking up papers, etc.	$ 3.00	$.....	$ 3.00
Equipment	61.72	515.23	576.95
Building, care of	27.06	.....	27.06
Building, repairing	15.50	1.08	16.58
Swimming pool, etc.	823.91	747.21	1,571.12
Care of	41.96	.....	41.96
Supervising play	582.80	.....	582.80
Sundry supplies	.....	88.59	88.59
	$ 1,555.95	$ 1,352.11	$ 2,908.06
Improvement			
Fence	$.....	$ 190.67	$ 190.67
Hand ball court	42.01	73.14	115.15
Children's shelter	.....	97.45	97.45
	$ 42.01	$ 361.26	$ 403.27

SHAVER

	Labor	Material	Total
Maintenance			
Supervising play	$ 181.78	$.....	$ 181.78
Sundry Supplies	.....	112.15	112.15
	$ 181.78	$ 112.15	$ 293.93

WASHINGTON PLAYGROUND

	Labor	Material	Total
Maintenance			
Apparatus	$ 209.03	$ 33.00	$ 242.03
Care of grounds	126.58	.....	126.58
Supervising play	542.38	.....	542.38
Sundry Supplies	.....	27.80	27.80
	$ 877.99	$ 60.80	$ 938.79

WOODSTOCK

	Labor	Material	Total
Maintenance			
Supervising play	$ 14.32	$.....	$ 14.32

SCHOOL PLAYGROUNDS

	Labor	Material	Total
Maintenance			
Inspection, apparatus and erection	$ 176.25	$.....	$ 176.25

MULTNOMAH TANK

	Labor	Material	Total
Maintenance			
Equipment	$.....	$ 39.38	$ 39.38
Swimming pool	451.67	38.07	489.74
Care of	114.12	15.19	129.31
	$ 565.79	$ 92.64	$ 658.43
Improvement			
Engineering	$ 26.33	.....	$ 26.33
Tank, etc.	217.83	$ 1,061.75	1,279.58
	$ 244.16	$ 1,061.75	$ 1,305.91

PENINSULA ANNEX

	Labor	Material	Total
Maintenance			
Ball grounds	$ 270.70	$ 102.85	$ 373.55
Improvement			
Engineering	$ 6.46	$.....	$ 6.46
Ball grounds	76.02	397.30	473.32
	$ 82.48	$ 397.30	$ 479.78

TWELFTH AND DAVIS BALL GROUNDS

	Labor	Material	Total
Maintenance			
Watching and care of grounds	$ 599.20	$ 79.69	$ 678.89
Improvement			
Ball field, house, water and sewer	$ 108.30	$ 1,026.79	$ 1,135.09
Equipment	.....	172.96	172.96
Engineering	1.92	.....	1.92
	$ 110.22	$ 1,199.75	$ 1,309.97

MONTGOMERY TRACT

	Labor	Material	Total
Maintenance			
Maintenance	$ 381.41	$ 50.85	$ 432.26
Tools	.....	.62	.62
	$ 381.41	$ 51.47	$ 432.88
Improvement			
Grounds, Bldgs., Backstops, Water, Sewer	$ 261.80	$ 721.31	$ 983.11

57TH AND 65TH AVENUE

	Labor	Material	Total
Improvement			
Playground and backstops	$ 14.25	$ 3.29	$ 17.54

55TH AVENUE AND 72ND STREET, S. E.

	Labor	Material	Total
Improvement			
Engineering	$ 7.13	$.....	$ 7.13

26TH AND NORTHRUP STREETS

	Labor	Material	Total
Improvement			
Backstops	$ 14.25	$ 50.75	$ 65.00

WEST END

	Labor	Material	Total
Improvement			
Ball field	$.....	$ 15.00	$ 15.00

EAST 7TH AND EAST 33RD AND FREEMONT

	Labor	Material	Total
Improvement			
Engineering	$ 9.30	$.....	$ 9.30

ALL PARKS

	Labor	Material	Total
Maintenance			
Stock	$.....	$ 1,695.77	$ 1,695.77

BUREAU OF WEIGHTS AND MEASURES

It is not the intention of this Bureau to prosecute in all cases of short weight or measure. Complaints are filed only in those cases where it is believed a clear intention to defraud exists. The majority of complaints made to this office are due to misunderstanding or mistakes as between the parties and it is believed that it is just as much our duty to clear up cases of this kind as it is to run down and prosecute cases of actual fraud. A great majority of the business men welcome our inspections, as is evidenced by an increasing demand for special tests.

It is recommended that a number of the owners of wagon platform scales located in convenient parts of the City be authorized to issue certified statements of weight. This could be done without the expenditure of any money on the part of the City and it would do much to insure the delivery of full weight in coal and similar commodities, and would also safeguard the interests of non-residents, who at the preesnt time are unable to obtain disinterested statements of weight on merchandise shipped into the city.

This office is in receipt frequently of requests from importers and others for work of this kind which, with our limited force, we are unable to do.

Scales tested, found accurate and sealed	2996
Scales tested, adjusted and repaired	166
Scales ordered repaired	245
Scales condemned	355
Total scales tested	3762
Weights found accurate and sealed	707
Weights corrected	12
Weights condemned	26
Total weights tested	745
Automatic pumps and tanks sealed	257
Automatic pumps and tanks ordered repaired	39
Automatic pumps and tanks adjusted or repaired	53
Automatic pumps and tanks condemned	5
Total automatic pumps and tanks tested	354
Liquid capacity measures sealed	661
Liquid capacity measures condemned	63
Total	724
Taximeters tested and sealed	29
Taximeters condemned for repairs	6
Total taximeters tested	35
Wood measured, cords	4,731
Coal reweighed, pounds	10,000

COMPLAINTS FILED IN MUNICIPAL COURT

Short weight in potatoes	3
Found guilty and fined	1
Found guilty and sentence suspended	2
Short weight in sausage	1
Found guilty and fined	1

ANNUAL REPORT

OF

THE DEPARTMENT OF PUBLIC UTILITIES

FOR THE FISCAL YEAR ENDING
NOVEMBER 30, 1915

DEPARTMENT OF PUBLIC UTILITIES

WILL H. DALY
COMMISSIONER

BUREAU OF WATER WORKS—
L. S. Kaiser, Superintendent
D. D. Clarke, Engineer

BUREAU OF STREET CLEANING—
Alex Donaldson, Superintendent

BUREAU OF GARBAGE DISPOSAL—
Wm. G. Helber, General Foreman

MUNICIPAL LIGHTING—
C. F. Wiegand, Clerk

MUNICIPAL LIGHTING

To the Honorable Mayor and Council:

A subject of major importance at this time is adequate street lighting.

The City is now expending annually about $200,000 for lighting streets, buildings and gulch bridges.

There are now on file in this office about 1,200 petitions for the establishment of additional arc lights. In checking over these petitions it is found that it would be good practice to install fully 800 of these requested lights.

It has not been thought practical in the past to greatly increase the number of arc lights in service, on account of the expenditure involved. Therefore, I have approached the subject from a new angle, hoping to accomplish the greatest economy and service to the City.

Observations of the low water flow of Bull Run River for the past 15 years shows that almost immediately the City must authorize the impounding of the storm waters of this river in order to provide sufficient water for the low water period, which usually occurs late in August or during the month of September. Had the 7,690 vacant services in 1915 been in active use the City would have faced a serious problem during the dry period of the past summer.

There being no question that the City should provide more lights for its streets and that it must impound water during the storm period to carry the consumers over the low water period, it was determined to blend the two problems into one, and with this end in view the engineering corps of the Bureau of Water Works during the past year in its explorations of the Bull Run Watershed to determine future additional water supply or locations for dam sites for impounding the water, has made these investigations with the view of finding not only the best point for constructing an impounding dam, but to so locate such dam that the power therefrom may be used for municipal lighting purposes. The data so far secured, while yet incomplete, shows that sufficient water may be impounded by the construction of a dam to develop 4,000 horsepower for a ten-hour average load. The cost of such dam (being necessary for water works operation) could well be divided between the Bureau of Water Works and the Municipal Lighting Bureau. If this were done the cost to the power plant would be very moderate.

The City is now using 157 acres of underground construction at a cost of $63.60 each per year, and 3,392 arcs of overhead construction at a cost of $51.60 each per year, or a total number of 3,549 at a total cost per year of $185,064.00. This makes an average cost per arc per year of $52.13 plus.

The arc lamps now in service are of the following illuminating values:

Amperes	4
Terminal volts	75-80
Arc volts (average)	75
Terminal watts	310
Arc watts	300
Mean lower hemispherical candle power	525
Terminal watts per mean lower hemispherical candle power	.59
Arc watts per mean hemispherical candle power	.57
Mean spherical candle power	276
Terminal watts per mean spherical candle power	1.12
Arc watts per mean spherical candle power	1.09

A computation of the above shows that the City is using at terminals a total of 1,520 horsepower at a cost per horsepower year of $121.52 plus.

While the City is expending about $200,000 per year for lighting streets, parks, gulch bridges and buildings, the business firms of the City are also expending a considerable sum for the post lighting in the business streets of the City. No doubt, in the near future, the business men will tire of this burden and will ask (and properly so) that the City should assume the care of street lighting in the business section as well as in the residence districts.

There is no doubt but that a municipal system may be devised and a post lighting system throughout the business districts adopted whereby the City would take over the expense of maintaining and operating street lighting of the entire City without discrimination as to locality or style of lighting used.

As above stated, the City is now requiring approximately 1,520 horsepower. There is little doubt but what this may be increased to 3,000 horsepower through a municipal lighting system at little or no additional expense to the City.

From the experience of American municipalities it is proven that the most economical policing of a city is an efficient street lighting system. The City may, by combining its water conservation for municipal purposes with a municipal power plant, secure a municipal lighting system of the greatest efficiency and economy. An investment in the mountains in development of this kind means that the money now necessary to be expended for impounding purposes will do double duty by also serving the City with a lighting service and added water supply.

RECEIPTS AND EXPENDITURES

Appropriation (Ordinance 29821)	$196,000.00
Appropriation (Ordinance 30115)	500.00
Sale of material	47.34
	$196,547.34
Total expenditures	191,379.83
Balance	$ 5,167.51

DETAILED EXPENDITURES

Arc lighting	$176,978.01
Linnton	1,326.83
St. Johns	2,759.76
Patrol service	108.64
East Twenty-eighth street bridge	178.90
East Twelfth street bridge	123.74
East Twenty-first street bridge	281.36
Grand Avenue bridge	130.23
Union Avenue bridge	195.52
Street cleaning	761.85
Police department	23.08
Police department	60.86
Purchasing department	212.98
City Hall	1,511.51
Comfort stations	192.06
City jail	2,276.74
Park board	1,715.02
Free employment bureau	1.75
Fire department	1,605.29
Public market	36.12
Municipal shop	9.84
Decorative lighting	236.32

Decorative lighting buildings, personal service	147.50
Rents	500.00
Supplies	5.92
Total	$191,379.83

LIGHTS IN SERVICE NOV. 30, 1915

Overhead arcs, December 1, 1914	3,197
Overhead arcs installed	62
Acquired by annexation of St. Johns	135
	3,394
Arc lights discontinued	2
Total overhead arcs	3,392
Underground arcs, December 1, 1914	160
Underground arcs discontinued	3
Total underground arcs	157
Total number of incandescent lights acquired by the annexation of Linnton now in service	93

BUREAU OF WATER WORKS

Available balance of water fund November 30, 1914		$ 20,266.09
Net receipts for water sold		705,978.30
Interest on daily balances		6,050.19
$595,000 Water bonds sold		*560,800.00
Accrued interest on above bonds		1,175.56
Sale of old water pipe, etc		5,618.23
Linnton funds transferred to water funds		5,512.89
Rent of municipal garage		600.00
Rent of ground		125.00
Interdepartmental credits, etc		43.40
Warrants cancelled as per auditor's report		53.15
Material drawn from stock in excess of this year's purchase		12,689.42
		$ 1,318,912.23
Disbursements during fiscal year:		
Interest on bonds	$307,985.00	
Payments into sinking fund	143,880.00	
Operation, maintenance, etc	189,456.64	
Refund of meter deposits	15,395.15	
Construction, extending mains, improvements, hydrants, etc	358,949.25	
Improvement bond sinking fund	181,861.21	
Tools and equipment purchased	5,333.61	
Meters purchased	6,141.05	$1,209,001.91
Available balance of water fund November 30, 1915		$ 109,910.32

*From the above item, "Sale of bonds $560,800.00," there should be deducted the item "Transfer to improvement bond sinking fund $181,861.21," as the latter sum was paid into the Improvement Bond Sinking Fund to retire improvement bonds which had been issued for the construction of water mains, on which bonds the Bureau of Water Works was paying 6 per cent interest which, in effect, substitutes 4 per cent Water Bonds for the Improvement Bonds of higher rate.

Decrease of net receipts in 1915, amounting to 17.3 per cent, is due to a heavy reduction of water rates and earnings in 1915, part of which were not collected in that year owing to a change in the system of collection. Actual increase of revenue during 1915 is five per cent, based upon the rate for service in 1914.

LINNTON WATER SYSTEM

As a result of the election of June, 1915, the Town of Linnton was annexed to the City of Portland and thereby the Bureau of Water Works fell heir to its municipal water system, and an estimate of Receipts and expenditures of that unit of our system is as follows:

RECEIPTS

Water revenue	$ 2,400.00

DISBURSEMENTS

Operation		
Collection	$ 60.00	
Inspection and meter reading	288.00	
Pump	140.00	
Regulating valves	60.00	
Maintenance		
Pump	640.00	
Repairing mains	300.00	
Interest on $150,000, 5½ per cent bonds	8,250.00	
Sinking fund 2 per cent	3,000.00	
Total	$12,738.00	
Less revenue	2,400.00	
Deficit	$ 9,338.00	

It will be seen by the above that there will be a loss to the Bureau of Water Works from the operation of the Linnton unit, of more than $9,000.00 per annum.

There is little promise of any added water revenue in the district formerly known as Linnton. Therefore the above loss may be reasonably expected to continue for a considerable number of years.

SERVICE SURVEY

An inquiry during the latter part of 1914 revealed the fact that there had been no complete survey of water services and fixtures, or inspections during the life of the Municipal system, and only one partial survey about 20 years prior to the year 1914.

Appreciating the fact that during this long period of operation without check there must be a great many inaccuracies as to service and fixture records, it was determined to begin a most comprehensive survey beginning with January 1, 1915.

There is a double purpose to be accomplished by such a survey or investigation. Not only the loss in revenue is to be considered, but on account of a great many small systems having been purchased and taken over by the Bureau of Water Works within the past fifteen years, the construction of the service pipes, of which no set rule had been followed, made it difficult, from the viewpoint of operation, to control those acquired units.

Commencing January 1st, three crews, consisting of two men each, were put in the field in different points of the City, their duties being to locate service pipes, curb cocks, and to survey the premises of each consumer.

The following tabulation shows, in detail, the work done and results accomplished by these crews for the fiscal year ending November 30, 1915. The total number of inspections made during this eleven-month period was 20,078, about 35 per cent of the total number of water services. This work is being continued during the year 1916 and will be completed before the close of 1917.

Number of inspections:

January	2,270	July	1,306
February	2,031	August	1,195
March	2,050	September	1,970
April	1,925	October	2,208
May	1,882	November	1,541
June	1,700		
		Total for 11 months	20,078

MONTHLY EFFECT ON REVENUE

MONTH	Rates	Increased	Rates	Decreased	Net Monthly Increase
January	174	$77.10	24	$4.40	$72.70
February	165	79.05	13	3.05	76.00
March	176	78.35	20	7.00	71.35
April	170	73.35	31	7.05	66.30
May	140	60.50	14	3.35	57.15
June	94	43.85	9	2.95	40.90
July	81	37.30	14	4.80	32.50
August	69	41.05	11	3.90	37.15
September	133	69.40	13	2.70	66.70
October	176	68.40	20	6.65	61.75
November	118	67.80	16	4.15	63.65
Total for 11 months	1496	$696.15	185	$50.00	$646.15

SERVICES AND FIXTURES NOT ON RECORD

	Services	Fixtures
January	7	50
February	4	103
March	5	60
April	5	65
May	2	66
June	2	34
July	1	52
August	5	15
September	10	56
October	12	133
November	4	98
	57	732

BACK BILLS RENDERED

MONTH	Bills Rendered	Cash Paid	Adjustments	Balances
January	$ 1,012.55	$ 845.55	$ 98.70	$ 68.30
February	473.80	310.05	163.75	0.0
March	283.20	228.95	52.80	1.45
April	480.65	316.30	39.95	124.40
May	409.30	325.30	55.35	28.65
June	478.80	363.90	84.90	30.00
July	1,667.35	1,620.60	43.15	3.60
August	279.85	166.35	48.20	65.30
September	1,244.80	643.60	430.00	171.10
October	727.75	476.40	108.10	143.25
November	524.40	238.90	140.70	144.80
Total	$ 7,582.45	$ 5,535.90	$ 1,265.70	$ 780.85

Note: Of the outstanding balances on this account, nineteen services have been shut off with a total of $332.30 against such services. Therefore, out of the total amount billed, $7,582.45, there is but $445.00 outstanding which is collectible at an early date. Over ninety (90%) per cent of these bills have, therefore, been liquidated, constituting as it does a remarkable showing for this particular activity.

LEAKING FIXTURES

	Water Closets	Other Fixtures
January	182	7
February	134	13
March	102	19
April	122	24
May	167	26
June	94	14
July	98	6
August	24	1
September	92	19
October	94	10
November	85	10
Total number leaks	1194	149

Premises found having water coolers	105
Refrigerating plants not listed	6
Meters installed as a result of inspection	209
Water closets and urinals found which were not provided with tanks or self-acting float valves	99

NOTE—Of these 99 services having such fixtures, sixteen have made application to have meters installed. The expiration of the time

given to repair these fixtures has not yet arrived, consequently no action can be taken on the other services in time to make a note of it in this report.

Summarizing the above tabulation, we find the following startling result:

Of 20,078 premises inspected, the rates upon 1,496 services were increased; the rates of 185 were decreased. The total monthly net increase in revenue is $646.15.

It was found that of the above number (20,078 services), 57 water service connections existed of which the Bureau of Water Works had no knowledge and which had never paid any charges, and 732 fixtures existed for which no permits had ever been applied for. The Bureau, after careful investigation, had billed the delinquent premises in the amount of $7,582.45, of which $5,535.90 has been paid.

The expense of this survey was $7,469.03. The added annual revenue as a result of this inspection is $7,753.80. So it is clearly shown that the expense is justified from a financial viewpoint, not taking into account its great importance in operating the water system.

The financial result of this survey is more than satisfactory in that it shows an annual increase in revenue of $7,753.80 plus $7,582.45 back-billing to premises which have not paid the lawful rate, showing a total addition to water revenue of $15,336.25.

INVENTORIES—REAL ESTATE

Name	Location	Area in Acres	Value of Land	Value of Improvements
Old reservoir site	All of Blk. 32, Carruthers Add., Broadway and Lincoln Sts	.92	$ 100,000	$ 1.000
Portland Heights reservoir site	Blk. K," Greenway Add	.51	5,000	11,114
Repair and meter shop	S. E. ½ of Blk. 150, Portland, 4th and Market	.25	125,000	1,000
East Side Water Office	Lot 8, Blk. 139, East Portland, E. 7th and E. Alder Sts	.11	8,500	23,415
Site of Old Irvington standpipe	Lots 5 and 6, Blk. 257, Holladay Add., E. 13th and Schuyler Sts	.22	4,500	.....
Former pumping station	Tract foot of Sherman St	.50	12,000	.....
Bull Run conduit No. 1 and 2	Tract foot of Stephens St	.60	7,500	.....
Reservoir No. 3 and 4	Adjoining Washington Park	63.10	189,000	569,000
Water Tanks	Portland Heights	.04	600	.....
Water Tanks	Willamette Heights	.06	500	2,500
Albina Warehouse	Blk. 73, Albina, Randolph and Loring Sts	1.00	40,000	5,000*
Albina water office, shop and stable	Part of Blk. 25 and 26, Albina, Russell St., between Williams Ave. and Rodney Ave	.29	7,000	32,310
Old Highland Tank site	Lot 4, Blk. 6, Maegley Highland, Union Ave., between Wygant and Going Sts	.10	2,500	.....
Old tank site, Brown's system	E. 60th and Foster Rd	.08	700	.....
Old tank site, Brown's system	Lot 1, Blk. 1, Pomona Add	.08	300	.....
Old tank site, Brown's system	Lot in School Park Add	.01	50	.....
Old tank site, Brown's system	Lot 5, Blk. 22, Saginaw Heights	.10	300	30
Vernon standpipe	Tract E. 20th and Prescott	2.34	11,000	12,000
Palatine pump station	.....	21.00	60,000	10,000
High service reservoir (No. 1)	Mt. Tabor	5.75	28,000	134,000
Low service reservoir (No. 2)	Mt. Tabor	10.00	50,000	121,000
Reservoir 5 and 6	Mt. Tabor	45.17	150,000	690,000
Standpipe	Near Lusted's	.50	100	.....
Headworks	Clackamas & Multnomah Counties	4360.00	150,400	16,597.93
Standpipe	Council Crest	.25	900	2,000
Pump station	Old Kinzel Park pump station, E. 76th and Yamhill Sts	1.00	2,000	200
Tract for water tanks	Ext. 19th St. 100 ft. south of Spring St	.025	500	.....
Reservoir No. 2	S. 60ft L. 32 and 33, Blk. 20, 1st Add. to Linnton	.07	150	2,890
Reservoir No. 3	Lower Whitwood, Linnton	.25	500	2,890
Reservoir No. 4	Upper Whitwood, Linnton	.25	500	3,102
Reservoir No. 6	Part L. 8, Blk. 28, Willalatin, Linnton	.25	500	2,890
Reservoir No. 7	Lower Willbridge, Linnton	.22	475	3,102
Reservoir No. 8	Upper Willbridge, Linnton	.13	280	1,440
Whitwood Court Pump	L. 1, Blk. 24, Whitwood Court, Linnton	.34	1,475	212

PERSONAL PROPERTY ON HAND

Material for mains	$147,990.33
Material for Bull Run conduits	2,481.65
Material for submerged pipe	28,048.80
Meters	3,208.20
Tools and portable property, November 30, 1915	48,487.63

DISTRIBUTION OF WATER RECEIPTS

Operation and maintenance	26.83%
Interest on bonds	43.62%
Deposited in Sinking Fund	20.37%
Available for improvements, etc.	9.18%

CHARGES FOR WATER DURING 1915

Flat rate, ordinary dwelling, per annum	$ 7.20
Meter rates, minimum, per annum	6.00
Meter rates, first 150,000 gallons, per 1,000 gallons	.13 1-3
Meter rates, over 150,000 gallons, per 1,000 gallons	.10 2-3

The above are the rates as reduced at the beginning of the present fiscal year. For the prior year the flat rate for an ordinary dwelling was $9.00 per annum, with a minimum meter charge of $9.00 per annum. The meter rates were as follows:

Meter rates, first 4,500 gallons, per 1,000 gallons	$ .16 2-3
Meter rates, next 150,000 gallons, per 1,000 gallons	.13 1-3
Meter rates, over 154,500 gallons, per 1,000 gallons	.10 2-3

SERVICES—NOVEMBER 30, 1915—DETAILED STATEMENT

	Active Services	Vacancies
Dwellings, including flats	44,510	6,486
Dwelling and store combined	330	32
Apartment houses	320	4
Hotels, lodging houses, etc.	655	36
Manufactories	163	26
Stores, restaurants, etc.	1,904	555
Saloons	274	46
Office buildings, banks, etc.	130	3
Churches	163	7
Schools—Public and private	121	3
Laundries	61	9
Fire protection	411	4
Elevators	160	35
Miscellaneous	2,034	444
Total number actually paying water rates for November, 1915	51,236	7,690
New services installed during the year	1,649	.....
Total services November 30, 1915	.....	58,926
Total services metered	.....	15,495
Percentage of all services metered	.....	26.3
Dwellings served	.....	50.996
Percentage of dwellings metered	.....	22.28
Places other than dwellings served	.....	7,930
Percentage of places other than dwellings metered	.....	52.08

Dwellings metered are those where water is likely to be wasted and all places on higher elevations supplied by pumping system.

Of the above new services installed, 277 are included which were acquired by the annexation of the town of Linnton to the City of Portland, July 7, 1915—of this number 217 were metered.

Summary of receipts and disbursements of the Bureau of Water Works during the past 29 years of Municipal ownership:

Gross earnings		$12,504,233.20
Due from the City for water for fire protection, sprinkling, etc.		823,589.35
Cash receipts for water sold		$11,680,643.85
Miscellaneous receipts		72,321.95
Bonds sold by City of Portland, 1886 to November 30, 1915	$8,044,000.00	
Less discount on bonds sold	46,847.60	7,997,152.40
		$19,750,118.20

EXPENDITURES

Private waterworks purchased and improved	$ 1,102,236.22	
Gravity system and improvements	5,586,469.91	
Extending mains, etc.	5,365,064.63	
Meters, tools, etc., on hand	133,159.45	
Total cost of property	$12,186,930.21	
Operation and repairs	2,569,673.35	
Meter deposits refunded	15,395.15	
Interest on bonds	3,985,369.17	
Payments into Sinking Fund	882,840.00	$19,640,207.88
Available balance on hand November 30, 1915		$ 109,910.32

DISTRIBUTION OF WATER RECEIPTS

Operation and maintenance	21.99%
Interest on bonds	34.12%
Deposited in Sinking Fund	7.56%
Improvements and extensions	36.33%

PRESENT BONDED INDEBTEDNESS

Jan. 1, 1887	Jan. 1, 1917	5%	Purchase of water works	$ 700,000
July 1, 1893	July 1, 1923	5%	Construction of Bull Run system	2,200,000
Jan. 1, 1911	Jan. 1, 1936	4%	Construction of additional pipe line and purchase of property	500,000
March 1, 1911	March 1, 1936	4%	Construction of additional pipe line and purchase of property	500,000
Oct. 1, 1911	Oct. 1, 1936	4%	Construction of additional pipe line and purchase of property	500,000
March 1, 1912	March 1, 1937	4%	Construction of additional pipe line and purchase of property	500,000
Nov. 1, 1912	Nov. 1, 1937	4%	Construction of additional pipe line and purchase of property	250,000
June 1, 1913	June 1, 1938	4%	Construction of additional water mains and purchase of property	242,000
Aug. 1, 1913	Aug. 1, 1938	4%	Construction of additional water mains and purchase of property	75,000
Sept. 1, 1913	Sept. 1, 1938	4%	Construction of additional water mains and purchase of property	250,000
Nov. 1, 1913	Nov. 1, 1938	4%	Construction of additional water mains and purchase of property	22,000
Dec. 1, 1913	Dec. 1, 1938	4%	Construction of additional water mains and purchase of property	285,000
Feb. 2, 1914	Feb. 2, 1939	4%	Construction of additional water mains and purchase of property	175,000
Dec. 1, 1914	Dec. 1, 1939	4%	Construction of additional water mains and purchase of property	135,000
March 1, 1915	March 1, 1940	4%	Construction of additional water mains and purchase of property	460,000
May 1, 1891	May 1, 1921	6%	Construction of water system (former City of East Portland	250,000
April 1, 1913	April 1, 1933	5½%	Construction of Linnton water system	100,000
May 1, 1915	Serial	5½%	Construction Linnton water system	50,000
Total bonded indebtedness				$ 7,194,000

PRESENT PLANT VALUE

Total appraised value of water works property, 1903	$ 6,516,000.00
Improvements and extensions to November 30, 1915	4,079,658.73
Reservoir improvements	242,496.17
Third submerged pipe across Willamette river	119,789.55
Purchase of water plants (private)	121,368.98
Purchase of property, erecting buildings and improvement of real property	102,214.70
Bull Run Conduit No. 2 and Reservoirs Nos. 5 and 6	2,311,412.04
Preliminary work on new headworks and reservoir sites	43,003.49
Lowering submerged pipe across Willamette river	84,845.37
Dwellings and headquarters Bull Run headworks	17,094.36
Surveys of Bull Run Reserve	12,184.19
Linnton Water Works annexed (cost)	144,487.11
Redemption of bonds for water main assessments	284,469.32
Total	$14,079,024.01

CONDUITS AND RESERVOIRS

Available daily conduit capacity	67,500,000 gallons
Reservoir capacity	193,000,000 gallons

DISTRIBUTION SYSTEM

During the year under review, the work of installing new mains has been carried forward to meet the requirements of the several districts of the City, principally in the Northeast and Southeast districts.

The following tabular statement shows the extent of this work in recent years:

	Miles	Total Miles
Miles of mains in use, 4 inches diameter and over, January 1, 1909	.....	252.329
Laid during 1909	9.073	261.402
Laid during 1910	49.151	310.553
Laid and purchased during 1911	80.350	390.903
Laid during 1912	65.894	456.797
Laid during 1913	49.912	506.709
Laid and purchased during 1914	40.511	547.220
Laid during 1915	16.187	
Annexed during 1915—Linnton	11.006	574.413
	27.193	

From the foregoing it appears that the mileage of mains laid during the past year is considerably less than that laid during the year 1913 or during the year 1914.

There has also been laid considerable mileage of galvanized pipe, two inches in diameter, in the sparsely built up sections of the city, and largely in unimproved streets. During the year, 14.917 miles of pipes of this size have been added, including such pipes in Linnton, making total mileage of pipes less than four inches in diameter now in use 132.131 miles. Total now in use, four inches in diameter and over, 567.220 miles. Total of all sizes, 699.351 miles, not including the main supply conduits of steel and cast iron, 24 inches to 52 inches in diameter, between the Headworks on Bull Run River and the distributing Reservoirs at Mt. Tabor and the City Park.

The largest mains laid during the year were the 30-inch reinforcement main, connecting with the Vernon Standpipe, 2.733 miles, costing $106.940.07 (the first section of which was built in 1913), and 0.84 miles of 24-inch main leading from the Vernon Standpipe westerly to Union Avenue, costing $24,794.43.

The latter main is the first section of a second reinforcement main from the Standpipe, which ultimately will be extended West and North to the vicinity of University Park or St. Johns.

There was also laid 1.173 miles of 16-inch main to reinforce the East Side intermediate service district in Irvington and upper Albina.

A total of 1.73 miles of 12-inch main has also been laid in several districts as part of the permanent supply for the City.

DISTRIBUTION MAINS

Mains laid by department forces are as follows:

30-inch	2.733 miles
24-inch	0.842 miles
20-inch	0.035 miles
16-inch	1.173 miles
12-inch	1.725 miles
10-inch	0.015 miles
8-inch	6.976 miles
6-inch	2.688 miles
4-inch	.... miles
2-inch	9.181 miles
1½-inch	0.135 miles
Total	25.503 miles

MAINS ACQUIRED BY ANNEXATION (LINNTON DISTRICT)

12-inch	4.992 miles
8-inch	0.576 miles
6-inch	4.197 miles
4-inch	1.241 miles
3-inch	0.514 miles
2½-inch	0.068 miles
2-inch	3.036 miles
1½-inch	0.201 miles
1¼-inch	0.105 miles
1-inch	0.338 miles
¾-inch	0.217 miles
Total	15.485 miles

MAINS ACQUIRED BY BILL OF SALE

2-inch	0.831 miles
1¼-inch	0.034 miles
1-inch	0.142 miles
¾-inch	0.115 miles
Total	1.122 miles

RECAPITULATION

Mains laid by department forces	25.503 miles
Mains acquired by annexation (Linnton District)	15.485 miles
Mains acquired by bill of sale	1.122 miles
Total of all sizes added during the year	42.110 miles
Total mains abandoned or relaid with larger sizes	14.038 miles
Net increase during the year	28.072 miles
Total expenditure during the year account extending mains, as per Superintendent's report	$289,313.35

MAINS LAID BY PRIVATE OWNERS

(Not included in foregoing summaries of pipe in use.)

8-inch	0.074 miles
6-inch	0.613 miles
Total	0.687 miles

PROPOSED EXTENSION OF MAINS

The policy adopted during the year has been to lay permanent cast iron mains of suitable size in all streets under contract for the laying

of hard surface pavement, the mains being laid in advance of the pavement work. While for the sparsely built up sections, where the streets are unimproved, or at least are not to be paved in the immediate future, and a showing can not be made of at least 6 per cent revenue per annum, or an urgent need of improved fire protection service is not apparent, then as a rule 2-inch pipes are installed. The outlay required during the year has been materially lessened by the adoption of this policy, but the wisdom of this course will only appear in the event a considerable period shall elapse before the demand for a larger supply makes it necessary to substitute larger pipes for the small ones now being laid.

Few mains have been laid during the year under the charter provision providing that water mains may be laid by private owners and later taken over by the City, when a showing can be made of at least 6 per cent revenue; and no mains so laid during former seasons have been purchased during the year.

For the coming year it will probably be necessary to lay about the same mileage of 8-inch and 6-inch mains, and smaller pipes, as were laid during the present season, in order to meet the demands for improved domestic and fire protection service and to provide for necessary mains in streets about to be paved.

The following large mains have been reported upon in former years, but action thereon has so far been delayed, namely:

16-inch main, Morrison, Fourth to Chapman Streets, 3700 lineal feet; estimated cost, $20,000.00.

12-inch main, Washington, Fourth to Fourteenth Streets, 2860 lineal feet; estimated cost, $10,500.00.

These mains are designed to reinforce the present gridiron system in the West Side district mainly for fire protection purposes. The laying of these mains has been delayed heretofore, in part, because it was desired to avoid the expense of cutting the asphalt pavement in these streets by waiting until a general repair of the streets should become necessary, and, in part, on account of the high pressure fire mains projected to cover a portion of the territory to be served by the proposed mains. It is not contemplated to take up the work of laying these mains during the coming year, but they will ultimately be needed for the improvement of the service in the locality named.

EXTENSIONS PROPOSED BY THE NATIONAL BOARD OF FIRE UNDERWRITERS

Several of the mains heretofore recommended by the National Board of Fire Underwriters have not yet been laid. On the West Side the list of mains so recommended includes the following:

16-inch high gravity service, Cornell Road and Twenty-fourth Street, Washington to Lovejoy Streets. Ultimately this main should be extended to Twenty-ninth Street and St. Helens Road for the reinforcement of the district along the water front to Linnton, but this is not necessary at present. No extension of this main is planned for the coming year. The list also includes:

12-inch low service main, Fifth Street, Morrison to Alder.

12-inch low service main, Ankeny and Ash, Front to Fourth Streets.

12-inch high service main, Twelfth Street, Yamhill to Stark.

These mains should be laid at an early date for the improvement of the service.

On the East Side, the Underwriters have recommended laying the following:

16-inch main, Stark Street, East Twelfth to East Twenty-eighth Streets.

16-inch main, East Everett, East First to East Twelfth Streets.

16-inch main, East First Street, Holladay Avenue to Hancock Street.

Other mains having been laid which measurably act as substitutes for the foregoing, therefore, the mains listed above have not been considered as a part of the work required in the immediate future.

Officials of the Underwriters' Rating Bureau have recently called attention to the fact that at present the supply for the West Side business district is obtained through a single pipe leading from Mt. Tabor to the City Park reservoirs.

For the crossing of the Willamette River a double line of flexible joint submerged pipe has been provided, but for the remaining distance a single 32-inch line is depended upon. While a duplicate line for the entire six miles distance between the two reservoirs would be a desirable improvement, yet it has not been looked upon as imperative under the present circumstances. The cost of such a duplicate line would approximate $260,000.00 for a 30-inch cast iron main, which would have to be laid under paved streets for the most part, but its construction would postpone the time when additional reservoirs will be required in the West Side district.

CHANGES DUE TO GRADE CROSSING ELIMINATIONS

O. W. R. R. & N. Co.—The plans now being carried out by the Department of Public Works for the elimination of grade crossings along the line of the O. W. R. R. & N. Co., between East Thirty-third and East Eighty-second Streets, will necessitate the taking up and relaying for short distances of several of the large water mains, where they cross the railroad tracks in question, for the supply of the Vernon standpipe and adjacent territory. These mains are the 24-inch in East Thirty-third Street, and in Halsey Street and East 47th Street; the 30-inch main and a 12-inch main at East Sixtieth Street; a 12-inch main at East Eighty-second Street; besides 8-inch mains at East Thirty-seventh and East Fifty-third Streets.

It is now understood that the expense of lowering or rebuilding these mains to conform to changed conditions of grade, etc., will be included by the Department of Public Works in the cost of the re-grade improvement which is to be borne in part by the City and in part by the Railroad Company. It is expected that the Water Bureau will be called upon to supervise the relaying of all water mains, but will not be required to assume other responsibility for the work.

Southern Pacific Co.—The Council has also authorized the construction of a viaduct at the crossing of the Southern Pacific tracks on Holgate Street. This will involve the relaying of about 1200 feet of 12-inch pipe at an estimate cost of $1200.00.

REPAIRS TO MAINS

During the year but few breaks have occurred in the larger distribution mains, and in no case did extensive property loss result therefrom.

On June 17, 1915, a break occurred in the 16-inch main in Salmon Street, between Fifth and Sixth Streets, but no damage was done other than to delay the trains of the Oregon Electric Railway for a

short time. This main has been in service since 1891, and at some points is almost directly under the railroad tracks.

On July 3rd, a break occurred in the 12-inch main at East Sixtieth and Glisan Streets, caused by the settlement of a sewer trench completed in April, 1914. The flow of water caused some damage to sidewalks and to the foundation of one building in the vicinity. The street repairs and the claims for damage to private property aggregated $310.00. Repairs to the main were made at once, and the main was again placed in service on the same day.

On September 2, 1915, the 24-inch Highland main gave way at a point in East Thirty-third Street, near the intersection with Campaign Street, which resulted in an overflow of some unimproved property in the vicinity. The break was repaired in a few hours and water again turned into the main. A few houses connected with the main in the vicinity of the break were inconvenienced during the night while the water was shut off for the purpose of repairing the broken pipe. No damage resulted from the overflow of the water at this point.

On September 28th, a break occurred in the 8-inch main at the intersection of East Thirty-ninth and Burnside Streets, which occasioned a greater property damage than either of the two breaks mentioned above. This was occasioned by the fact that the streets were paved with asphalt upon a light base resting upon sandy soil. The water found its way under the pavement for nearly a block, necessitating the relaying of about 2000 square yards of pavement. Other than this, there was but slight damage to property or inconvenience to residents.

HIGH PRESSURE FIRE MAINS

The construction of a system of high pressure mains for fire protection purposes in the congested business district of the City, west of the River to Sixth Street, and east of the River to Grand Avenue, for which bonds were authorized in 1907 in connection with the construction of a fire boat, has been under consideration during the year. Of the bond issue authorized there remains a total of $150,000.00 applicable to this purpose, or an estimated net amount of about $142,000.00. Tentative plans have been in the course of preparation for a system of mains, covering as many streets as possible under the present authorization, but all work upon same has now been suspended, owing to the decision of the Council not to undertake this work during the coming year.

As at present outlined, this project will call for the construction of 21120 lineal feet of 8-inch, 10-inch, 12-inch and 16-inch mains at an approximate cost of $129,500.00. A northerly extension of the system on the West Side as far as Everett Street will cost $16,000.00 additional, and a westerly extension, as far as Ninth Street, will cost approximately $19,500.00 in addition to the original project. The cost of these mains per lineal foot will be large, owing to the fact that nearly every street traversed is now covered with a hard surface pavement with a concrete base, and the effect upon the street pavements has been one of the reasons why this work has been so long delayed.

PIPE STORAGE YARD

The facilities for the storage and distribution of water pipes and other construction materials have not been changed during the year. Owing to the amount of work in progress being less than in former years, the inconvenience has not been felt so much this year, but still

the situation is one that calls for consideration in view of the future needs of the Bureau.

A tract of land from 3 to 5 acres in extent should be secured at some point which would permit of a railroad siding being constructed either on or alongside the premises. On account of the general growth of the City being largely on the East Side, it now appears as if the most suitable location for a storage yard will be in the Northern or Northeastern district. This matter should receive consideration during the coming year.

SERVICE PIPES

The installation of service pipes and maintaining a record of same has been mentioned in former reports. During the year a general inspection of all services to buildings in the City has been in progress in three different districts, but at present it is only about 50 per cent completed, but the results so far secured have been very satisfactory. In connection with this inspection for revenue purposes, measurements have been made by men detailed from the office for the purpose of locating the position of each corporation and curb-cock. When this work has been completed we shall have a record of the old services, but there will be difficulty with the new work so long as the present method is followed of granting permits to plumbers and depending upon the accuracy of the return they may make to the Superintendent's office.

It is respectfully recommended that a change of procedure be made as soon as possible and all service connections from main to curb be installed by and at the expense of the Water Bureau; and furthermore, that the laying of service pipes to vacant lots be discontinued. It is believed that this method will secure more satisfactory results at a less cost for both installation and maintenance.

It is now understood that in the future the City Engineer will lay service pipes to unoccupied lots in only those cases where the property owner shall especially request that such connection be made. An adherence to this policy will serve to diminish one source of danger to the distribution system which has been dwelt upon in former reports, namely, that from leaks in unused services. Thousands of these services have already been installed, and no more should be laid except upon a showing that they will be put into actual use within a short time, not exceeding a year or two.

SUBMERGED PIPE LINES

The submerged Pipe Lines, 24-inch and 30-inch steel mains, have been in use throughout the year. No repairs have been required.

RESERVOIRS

The reservoirs now in use are located at the following points:

	Material	Elevation	Gallons Capacity	When Built
Reservoir No. 1, Mt. Tabor	Concrete	411.6	12,000,000	1894
Reservoir No. 2, Mt. Tabor	Brick	229.2	20,500,000	1894
Reservoir No. 3, City Park	Concrete	299.5	16,400,000	1894
Reservoir No. 4, City Park	Concrete	229.5	17,600,000	1894
Reservoir No. 5, Mt. Tabor	Concrete	411.6	50,000,000	1911
Reservoir No. 6, Mt. Tabor	Concrete	305.0	75,000,000	1911
Portland Heights	Concrete	865.0	600,000	1908
King's Heights	Concrete	865.0	200,000	1911
South Portland	Concrete	475.0	60,000	1907
Willamette Heights	Concrete	445.6	60,000	1907
Tabor Heights	Concrete	590.0	200,000	1912
Vernon Stand Pipe	Steel	343.6	360,000	1906
Council Crest Stand Pipe	Steel	1096.5	60,000	1909
Burlingame Stand Pipe	Steel	635.0	114,000	1912
LINNTON DISTRICT				
Upper Linnton	Concrete	538.9	130,000	1913
Lower Linnton	Concrete	192.9	130,000	1913
Willallitan Park	Concrete	1065.6	130,000*	1913
Upper Whitwood	Concrete	566.7	130,000	1913
Lower Whitwood	Concrete	192.1	130,000	1913
Upper Willbridge	Concrete	768.3	65,000*	1913
Lower Willbridge	Concrete	189.9	130,000	1913
Total			194,199,000	

*Discontinued, October, 1915.

The general overhauling of the gate chambers at the several reservoirs built during the year 1894—Nos. 1, 2, 3, and 4—which was commenced last year, has been completed during the present season. Various changes and improvements have been made which may be summarized as follows:

RESERVOIR NO. 1, MT. TABOR

This basin has been cleaned, and the concrete lining repaired at a few points. The flap valve between the basin and the tank has been replaced with one of the sluice gate type. A 36-inch sluice gate was also installed between the weir chamber and the tank. The cylinder gates originally installed inside of the tank when the reservoir was built have been removed, as they never worked satisfactorily. A weir has been built with a recording gage attached for the purpose of measuring the overflow from the reservoir basin.

The roof of the gate chamber has been repaired, and the iron work inside and out has been cleaned and painted. The fence around the outside of the reservoir basin has also been painted. The reservoir and gate chamber are now in good condition.

The repairs to this reservoir during the 20 years since it was built have been very slight, and even with the work just completed the maintenance costs have been low.

The repair work described above has cost to November 1, 1915, for materials and labor, $3103.71.

RESERVOIR NO. 2, MT. TABOR

Repairs to the gate chambers at this reservoir, commenced in 1914, have been completed during the year. A sluice gate has been installed in place of the flap valve between the basin and the tank. A 12-inch

drain has been laid from the basin to the sump inside of the gate chamber. A sluice gate has been installed between the weir chamber and the tank, and also one between the weir chamber and the basin. The cylinder gates have been removed, and a weir with recording gage built to measure the overflow from the reservoir basin. The iron work has also been cleaned and painted.

The cost of the materials and labor for this work amounts to $2808.65.

Repairs have been made to the reservoir bottom at several points where the brick lining has given away, the repair work undertaken in 1914 not having been effective at all points owing to the defective foundation for the lining. At these points the holes have been filled with concrete. The indications now are that ultimately the bottom lining, at least for the East half or two-thirds of the basin, will have to be removed and replaced with concrete after the underlying material has been rolled or thoroughly consolidated, the original construction having been deficient in this regard. A test undertaken October 16 to 23rd showed the basin losing about two-thirds million gallons per day. Upon drawing off the water in the basin, a number of holes in the lining were discovered. These holes have since been repaired as stated above. By repeating these tests at intervals, and afterwards making such repairs as may seem necessary, it is expected that the leakage can be kept within a reasonable amount.

RESERVOIR NO. 3, CITY PARK

The repairs at this reservoir have been similar to those undertaken at the Mt. Tabor reservoir, viz.:

A sluice gate has been installed between the weir chamber and the basin, and one between the weir chamber and the tank; and the two cylinder gates inside the tank have been removed. An overflow weir with recording gage has also been built, and the iron work in gate chamber and the outside fence were thoroughly cleaned and painted. The reservoir basin was cleaned and the lining and face of dam were repaired at a few points where defective concrete was found.

The inspection shaft near the west end of the dam was relagged and a new plank cover provided.

Below the dam a new 12-inch drain connection was cut in above the valve in the 18-inch line which feeds the pump from the basin direct when the gate house is out of commission. This makes it possible to drain the reservoir without interfering with the service from the pumps when the latter are operated from the tank.

New concrete chambers were built to enclose the gates on the lines between the reservoir and the power house, thus facilitating the maintenance of these valves.

An 18-inch Premier meter was installed on the 18-inch gravity main, a concrete chamber having been built for the same at a point immediately east of the power house.

The pumping station has been cleaned and painted, the roof repaired, the electric wiring removed and a new switchboard installed.

The two Reidler pumps, which have been in continuous use for 20 years, were overhauled, together with the Pelton wheels which operate same. A new flywheel was installed on the Gould triplex pump, operated by electric power, replacing the one which broke recently. This pump was installed in 1906.

While repairs on this reservoir were in progress it was necessary to operate the steam pumping plant at Broadway and Lincoln Streets.

Cost of repair work, including operation of Broadway and Lincoln Street pump, $7344.99.

For some years there has been a slight seepage through the body of the concrete dam at this reservoir, which appears in the "laitance" deposit, which discolors the outer face. The water-proofing of the inner face of the dam, in order to remedy this difficulty, is now under consideration.

RESERVOIR NO. 4, CITY PARK

The repair work at this reservoir during the year consists of the following:

A 30-inch sluice gate has been installed in place of the flap valve between the basin and the tank. A 12-inch drain has been placed leading from the basin to the sump inside of the gate chamber; the two cylinder gates originally installed inside of the tank have been removed; an overflow weir with recording gage installed to measure overflow from basin into the City sewers; iron work in gate chamber and fence around basin thoroughly cleaned and painted; and a reinforced concrete gate chamber built over the valve controlling the flow between the 32-inch supply main and Reservoir No. 4. This chamber replaces the small one originally built of brick—at a considerable depth below the present surface—with a terra cotta pipe manhole, which made it difficult of access and besides it could not be drained.

A 24-inch Premier meter has been installed in a concrete gate chamber on the 30-inch low service distribution main leading from this reservoir.

While the above work was in progress, it was necessary to operate the steam pump at Broadway and Lincoln Streets for a period of 27 days.

The cost of the material and labor for the repair work at this reservoir, including operation of steam pump, aggregates $8027.74.

It was also noted that at one point on the west side of this basin the parapet wall and fence have been bent out of shape by the earth pressure, but this repair work was deferred until another season.

RESERVOIR NO. 5, MT. TABOR

This reservoir has been in constant use during the year, no material changes or repairs having been undertaken. It has been observed that there has been an increase in the volume of water flowing in the under-drains from this basin, which indicates a possible enlargement of the joints between some of the concrete lining slabs. This will be examined into at an early day.

It was noted that there was considerable vibration in the 36-inch steel pipe between Reservoirs No. 5 and No. 6, where it passes through the tunnel under dam No. 5. This was corrected by the placing of additional concrete piers under the pipe alternating with those originally constructed when the pipe was built.

The sprinkler system around the margin of the basin has been improved by the substitution of 2½-inch risers with fire hose connections for the 1-inch riser originally used.

The plank walk between Reservoirs No. 5 and No. 6 has been repaired and a handrail constructed, and the roadway in front of the gate chamber has been drained.

The cost of the above work for materials and labor amounts to $662.24.

RESERVOIR NO. 6, MT. TABOR

Both basins of this reservoir have been drained and cleaned. In the North basin it was found that several of the lining slabs had been cracked, and in consequence the seepage into the under drains had noticeably increased. Parts of seven slabs have been repaired and the basins are again in use.

2½-inch risers with fire hose connections have been placed in the sprinkler pipe around the reservoir in place of the 1-inch risers originally installed.

The cost of above repair work for materials and labor amounted to $1025.04.

In the center of the North basin of this reservoir there has been installed a fountain or spray nozzle purchased of the J. L. Mott Iron Works of Brooklyn, N. Y.; and in the South basin there has been installed a somewhat similar fountain-head originally built for Reservoir No. 2. It is thought that the use of these nozzles will produce a pleasing effect which will more than justify the attendant expense. In order that these fountains may be operated continuously, with the full obtainable head, it will be necessary to run an independent 8-inch pipe from the fountains to Reservoir No. 5, connecting with the steel tank in the gate chamber. This can be done at small expense and will enable the fountains to play at all times regardless of the supply passing from Reservoirs No. 5 and No. 6, which now varies from time to time.

STAND PIPES AND TANKS

The concrete-lined tanks situated at:

Portland Heights	600,000 gal. capacity
Kings Heights	200,000 gal. capacity
Tabor Heights	200,000 gal. capacity
South Portland	60,000 gal. capacity
Willamette Heights	60,000 gal. capacity
Lower Linnton	130,000 gal. capacity
Upper Linnton	130,000 gal. capacity
Lower Whitwood	130,000 gal. capacity
Upper Whitwood	130,000 gal. capacity
Lower Willbridge	130,000 gal. capacity

have been in use throughout the year without repair or extra cost for maintenance.

The steel tanks situated at:

Council Crest	60,000 gal. capacity
Burlingame	114,000 gal. capacity

have required no repairs during the year.

At the Vernon stand pipe, 360,000 gallons capacity, a rearrangement of valves has been made in order to provide for a connection with the new 30-inch reinforcement main from Mt. Tabor, and the new 24-inch distributing main leading to the westward. As at present arranged, the 24-inch and 30-inch supply pipes from Mt. Tabor feed into the stand pipe through one opening, and they can also be united for the supply of the district beyond when the standpipe is cut out. The two large distributing mains are also united at this point—one running from the standpipe north to Prescott Street and thence west and north, and the other south to Skidmore Street and thence west.

By means of a float inside of the tank, which mechanically operates a valve regulating the hydraulic gate in the supply main, the height of the water in the standpipe can be regulated much more satisfactorily

than was possible with the pressure device originally installed for this purpose.

A 20-inch Premier meter has been installed on the 20-inch discharge main, and a brick gate chamber has been constructed with a frame building above to include all the valves and regulators at this point. This makes all the vital points of the system readily accessible.

Improvement to the grounds and repairs to the fence surrounding the standpipe site have also been made.

The cost of this work, not including the connections of the 30-inch and 24-inch mains, which has been charged to extension of mains, amounts to $556.10.

PUMPING STATIONS

The following pumps are now in use:

	Style of Motor	Elevation	Elevation Supplied	Gallons Per Day Capacity
City Park	Hydraulic	230	445	1,000,000
City Park	Hydraulic	230	865	500,000
City Park	Electric	230	865	500,000
Council Crest at Greenway, Portland Heights	Electric (automatic)	865	1096.5	220,000
Fulton	Electric (automatic)	230	635	250,000
Reservoir No. 2	Hydraulic	230	590	375,000
Palatine Hill, Broadway and Lincoln	Auxiliary Steam Plants.			

Also the following pumps, connected with the Linnton Municipal supply and transferred to the care of the Water Bureau on July 8, 1915.

	Style of Motor	Elevation	Elevation Supplied	Gallons Per Day Capacity
Linnton	Electric (automatic)	190	537	108,000
Whitwood	Electric (automatic)	190	565	108,000
Willallitan	Electric (automatic)	550	1062.5	108,000
Willbridge	Electric (automatic)	187.5	762.5	108,000

In the interest of economy of operation a re-arrangement of the Linnton service has been made since the pumps and mains were taken over by the City, and only the pumps at Linnton and Whitwood are in operation at this time.

CITY PARK PUMPS

The two Reidler pumps at this station, each operated by a Pelton water wheel, have been overhauled and are in good condition. The Gould pump operated by electric motor has had a new fly wheel and also a new switchboard installed so that current for the pumps can be taken from the generator originally installed for lighting the gate house.

COUNCIL CREST PUMP, GREENWAY RES.—ELECTIC AUTOMATIC CONTROL

The pump house has been cleaned and painted, and the roof repaired.

Adjustments and overhauling of the pump cost a total of $44.95.

During the hottest days in the summer this pump worked to its full capacity. It is, therefore, probable that in the near future a larger

pump will have to be installed or the capacity of the standpipe increased.

FULTON PARK PUMP—ELECTRIC AUTOMATIC CONTROL

This pump has been overhauled and house cleaned and painted. It has been in continuous operation during the year. No accidents or shutdowns have occurred.

RESERVOIR NO. 2

The Smith-Vaile pump installed at Reservoir No. 2, and operated by a Pelton water wheel, for the supply of Tabor Heights, has been in operation throughout the year. A rearrangement of the suction and discharge pipes has been made and the station is now in good condition.

PALATINE HILL PUMP

The auxiliary steam plant at Palatine Hill has been maintained in readiness for service.

New valves have been placed in the water end of this pump, and minor repairs and adjustments made. Some time during the coming year the second battery of boilers should be overhauled, as the brick work and mud drum are in bad condition. It is estimated that this work will cost $250.00.

BROADWAY AND LINCOLN STREETS STATION

Has been maintained ready for service. No repairs required.

LINNTON PUMPS

The operation of the swo small pumps at Willbridge and at Upper Whitwood has been discontinued. They are, however, turned over at intervals and kept in repair.

A bent shaft and a wornout bearing at the Lower Whitwood pump have been repaired and the same is now working satisfactorily.

An underground control cable has been installed between the pump and the reservoir it supplies, so that this plant is now operated automatically.

The Linnton pump is in fair condition. The control line for this pump has been repaired and the plant is now operating automatically, but the underground work has not yet been completed.

Since the Linnton system was taken over an endeavor has been made to reduce the cost of operation of the reservoirs in that district, and to this end the use of the Willallitan and the Upper Willbridge tanks has been temporarily discontinued, the number of houses to be supplied from these reservoirs not warranting their longer continuance in service.

REGULATING VALVES

The following is a list of the pressure regulators that have been established at various points during recent years, especially on the West Side, in order to reduce the pressure in the street mains to satisfactory limits. These regulators are located at the following points, and are inspected periodically in order that they may be kept in

proper working order. The size, elevation and pressure on high and low pressure sides are as shown below:

Pressure Reg.	Kind	Size	Elevation	High	Low
				lbs.	lbs.
E. 38th and Woodstock	Mueller (old)	8"	206.0	78	22–25
E. 33rd and Ainsworth	"	3½"	146.0	82	40
E. 13th and Holman	"	8"	160.8	78	38–40
5th and Witham	"	4"	387.4	105	40
Kelly and Custer	"	3½"	252.0	95	40
17th and Elizabeth	"	4"	640.0	100	40
Myrtle and Chapman	"	4"	512.0	93	35
21st and Clifton	"	3½"	497.5	100	40
Chula Vista and Hermosa	"	4"	654.8	95	30
Macleay and Melinda	"	4"	506.0	90	30
Fairview and Rutland	"	3½"	492.0	95	40
Fairview and Alley	"	4"	639.7	100	40
Davenport and Alpine	"	1½"	584.7	122	40
Mill Street, Whitwood Court	Ross	6"	.....	61	30
Springville Road	"	6"	423.1	52	28

During the year, the regulator installed at Macleay and Melinda Avenues was out of commission for a short time, owing to a broken strainer; and the one at East Thirtieth and Ainsworth has been moved to East Thirty-third and Ainsworth. All the regulators and strainers have been painted with a metallic paint and are now in good working order.

In connection with the Linnton plant, four regulators were originally installed. Two of these have since temporarily been discontinued and the others have been overhauled and put in service. Those now in use are located at the following points:

Mill Street, Whitwood Court.

Springville Road, Whitwood Court.

AUTOMATIC PRESSURE RECORDING GAGES.

The use of Bristol recording gages, as reported in 1914, has been continued during the year and has proven to be of great benefit to the service. These gages are useful in recording the hour when excessive draft occurs on any main; the exact time when a break in a main occurs and the time the flow is re-established; and they will also record the fact of any excessive water hammer, if it should occur, endangering the safety of the pipes.

The gages now in use are located at the following points, viz.:

Bristol Gages	Elevation Feet	Pressure Pounds
Vernon High	251.52	70
Vernon Low	251.53	40
Russell—297 Sacramento	157.82	64
Portland Heights	.....	275
N. and S. Portland Pump	.....	125
123 E. 7th St. (Alder)	43.24	81
59th Ave. and 77th St.	239.01	74
Northern Sub	148.04	85
Eng. No. 20—13th and Tenino	122.76	47
City Hall High	66.00	97
City Hall Low	66.00	67

The number of pressure gages and regulators and large meters now in use at widely scattered points makes it imperative that men shall be specially detailed to make periodical examination of the apparatus

in order to insure that it is kept in proper working order. The men to whom this work has heretofore been assigned have sometimes been called upon in emergencies for special duties elsewhere. This work would be expedited if the man especially in charge had another motor car of small size at his command.

VENTURI METERS.

The following is a list of meters of the Venturi type already installed in connection with Conduit No. 2 from Bull Run and the larger distribution mains of the City, and also those already authorized and purchased but not yet installed owing to their late arrival from the factory. Those now in use are as follows:

1 52-inch Venturi, Conduit No. 2, Headworks.
1 44-inch Venturi, Conduit No. 2, Mt. Tabor.
1 24-inch Premier, Highland Main, Mt. Tabor, Reservoir No. 1.
1 30-inch Premier, Southeastern Supply, Mt. Tabor, Reservoir No. 1.
1 30-inch Premier, E. S. Int. Supply, Mt. Tabor, Reservoir No. 6.
1 24-inch Premier, Low. S. West Side, City Park, Reservoir No. 4.
1 18-inch Premier, High G. West Side, City Park, Reservoir No. 3.
1 20-inch Premier, High G. Peninsula Dist., Vernon Stand Pipe.
1 6-inch Premier, Pump Service, Tabor Heights, Reservoir No. 2.

Meters on hand to be installed as follows:

1 24-inch Premier, E. S. Low Service, Reservoir No. 2.
1 30-inch Premier, Highland Main, Reservoir No. 5.
1 8-inch Premier, South Portland, Force Main, City Park.
1 10-inch Premier, Willamette Heights, Force Main, City Park.
1 12-inch Premier, Portland Heights, Force Main, City Park.
1 12-inch Premier, King Heights, Force Main, City Park.
1 6-inch Premier, Council Crest, Force Main, Greenway Res.
1 10-inch Premier, Burlingame, Force Main, Fulton Park.

These meters automatically record the rate of flow for each hour, as well as the total volume passed each day, and thus afford a valuable check upon the daily consumption of the several districts of the City. By comparing the recorded flow into the different service districts with the readings of the service meters, accurate information can be secured regarding the needs of a particular locality and whether or not there is any actual cause of complaint. The meters now on hand will be installed early the coming year.

Expended during the year, account Venturi meters and installation of same, $7,519.59.

RECAPITULATION OF THE COST OF REPAIR WORK DURING THE YEAR 1914-1915.

Reservoirs and Gate Chambers	1914	1915
Reservoir No. 1	$ 1,596.40	$ 3,103.71
Reservoir No. 2	19,430.73	2,808.65
Reservoir No. 3	2,033.84	6,122.99
Reservoir No. 4	1,218.00	6,758.74
Reservoir No. 5	236.11	662.24
Reservoir No. 6	793.20	1,025.04
	$25,308.28	$20,481.37
		1,222.00
		1,269.00
		$22,972.37

Total 1914	$25,308.28
Total 1915	$22,972.37
	$48,180.65

The expenditures listed above have been made largely in connection with changes and alterations and repair of the basin at Reservoir No. 2, and the gate chambers in use at Reservoirs Nos. 1, 2, 3 and 4, which were built in 1894 and have, therefore, been in use for over 20 years. In 1904 extensive repairs were made at Reservoirs Nos. 3 and 4—relining the basins where damaged by the movement of the adjacent hillside. This repair work involved the expenditure of about $76,000.00 for new linings, in addition to cost of drainage tunnels. During all these years, few changes have been made in the gate houses until recently. Several of the valves had become badly worn, and hence were difficult to operate, and others were of a type not the best adapted to the service required. Through the changes now made, the operation of the gate chambers has been made so much easier and safer as to fully warrant the outlay specified.

LEAKAGE FROM RESERVOIRS.

The estimated leakage from the concrete and brick lined reservoirs now in use is as follows:

Reservoir No. 1	.....	gallons per day.
Reservoir No. 2	573,000	gallons per day.
Reservoir No. 3	48,000	gallons per day.
Reservoir No. 4	.....	gallons per day.
Reservoir No. 5	770,000	gallons per day.
Reservoir No. 6	346,000	gallons per day.

These amounts may appear to be large, in some instances, but it should be remembered that an absolutely water-tight basin is exceedingly difficult to secure. It is also believed that our experience in Portland in this respect is fully as satisfactory as that of other cities.

DRAINAGE TUNNELS AT CITY PARK.

Observations of the discharge from the drainage tunnels under the sliding land west of the City Park Reservoirs indicate that the flow has ranged from a maximum of 28,800 gallons per day on March 10, 1915, to a minimum of 13,100 gallons per day on November 4, 1915.

Measurements of the movement of the slide were taken in March, July and November. The recorded movement for the year being 0.44 inches, this being the average at 46 stations along a central belt of 100 feet wide, extending from the Western to the Eastern margin of the moving ground.

Total number of stations observed	227
Total number of observations taken	640
Average recorded movement for year 1910	0.52 inches
Average recorded movement for year 1911	0.48 inches
Average recorded movement for year 1912	0.30 inches
Average recorded movement for year 1913	0.40 inches
Average recorded movement for year 1914	0.35 inches
Average recorded movement for year 1915	0.44 inches

It is now 15 years and more since this system of surveys was inaugurated, and about 10 years since the construction of the drainage tunnels began to be markedly effective. As will be noticed from the foregoing, the average yearly movement since 1910 has been but about 0.41 inches. The only place where this movement has been apparent is along the West parapet wall of Reservoir No. 4, about 175 feet from the power house. Here the wall has been cracked and a section of the iron fence is inclined from the vertical, but the reservoir lining does not seem to have been effected. Considering all the circumstances of

the case, the results secured by the drainage and corrective work heretofore undertaken have been very satisfactory.

ADDITIONAL RESERVOIRS.

In former reports attention has been called to the necessity for additional reservoir capacity, especially in the West Side district, and the reasons heretofore given, in explanation of this need, still obtain. These conditions should not be overlooked and their consideration indefinitely postponed, although it is not considered imperative that action should be taken during the coming year, unless it may be thought advisable to secure the sites for one or more additional reservoirs. It may be stated, however, that if the construction of a new 30-inch main from Mt. Tabor to City Park should be undertaken in the near future, the reservoir work might safely be delayed for a time.

LINNTON WATER SUPPLY.

At the City election held June 7, 1915, it was voted to annex the town of Linnton, and on July 8th this district officially became a part of the City of Portland.

Estimated area of annexed district, 9.5 square miles.

Estimated population of annexed district (277x5), 1,385.

The water supply for the town of Linnton has been furnished during the past two years by a municipally-owned plant which has now been incorporated with that of the Portland City plant, and is being operated by the Water Bureau as a part of the City System.

The following is a list of the water mains, reservoirs and pumps, transferred by the act of consolidation, as above:

Water Mains acquired by annexation (Linnton District):	
12 -inch	4.992 miles
8 -inch	0.576 miles
6 -inch	4.197 miles
4 -inch	1.241 miles
3 -inch	0.514 miles
2½-inch	0.068 miles
2 -inch	3.036 miles
1½-inch	0.201 miles
1¼-inch	0.105 miles
1 -inch	0.338 miles
¾-inch	0.217 miles
Total	15.485 miles
Number of hydrants	38
Gate valves:	
2-inch	25
3-inch	2
4-inch	11
6-inch	23
8-inch	5
12-inch	12
Total	78

LINNTON RESERVOIRS

	Elevation Feet	Approximate Capacity
No. 1, Linnton	190.0	130,000 gals.
No. 2, Linnton	537.0	130,000 gals.
No. 3, Whitwood	190.0	130,000 gals.
No. 4, Whitwood	565.0	130,000 gals.
No. 5, (not constructed)	.....	.....
No. 6, Willallitan	1062.5	130,000 gals.
No. 7, Willbridge	187.5	130,000 gals.
No. 8, Willbridge	762.5	65,000 gals.
Willallitan Pump House Floor	550.0	.....

The use of Reservoirs Nos. 4 and 8 has been discontinued, the pumps supplying same having been shut down.

PUMPS

The Linnton Plant consists of a 4-stage Alberger Turbine Pump, the rated capacity being 75 gallons per minute under a head of 385 feet; direct connected to a 20 H. P. Fairbanks-Morse induction motor; 220-volt 3-phase, 60-cycle, 3,600 R. P. M., with a Cutler-Hammer automatic control for starting and stopping. This plant is in operation and is automatically controlled.

The Lower Whitwood Plant consists of a 4-stage Alberger Turbine Pump having a rated capacity of 75 gallons per minute against a head of 385 feet, direct connected to a 20 H. P. Fairbanks-Morse induction motor; 220-volt, 3-phase, 60-cycle, 3,600 R. P. M. This motor is controlled by a Cutler-Hammer starting and stopping device. This plant is in operation and automatically controlled.

The Upper Whitwood Plant consists of one Dean Triplex, single acting plunger pump, 4½x8, geared to a 15-H. P., 220-volt, 60-cycle, 3-phase, Westinghouse induction motor, 870 R. P. M. The motor control is a Cutler-Hammer automatic starting and stopping device. Capacity of pump, approximately 75 gallons per minute. Plant is now shut down. No service on system.

The Willbridge Plant consists of one Dean, single-acting, triplex plunger pump, 4½x8, geared to a 15 H. P., 220-volt, 60-cycle, 3-phase Westinghouse induction motor, 870 R. P. M., Cutler-Hammer Automatic starting and stopping device. Capacity of pump approximately 75 gallons per minute. Plant is now shut down. No service on system.

The Linnton water supply has been secured from the City of Portland under an agreement approved by the Water Board, Nov. 12, 1912, the Town of Linnton laying a 12-inch main from the Portland city limits to the business center of their town, a distance of 26358 feet—4.992 miles. In this manner they were able to secure a gravity supply reaching a distributing reservoir at an elevation of 190 feet. For the higher elevations of the town, dependence was had upon electric drive pumps installed at different points and pumping from the lower reservoirs to those at a higher level. The pumps and reservoirs are of small capacity, and, with the exception of the main supply pipe, the distribution mains are of small size, although probably adequate for the needs of the sparsely built up area, outside of the main business street, for years to come. Estimated "reproduction cost new," and including an allowance of 10 per cent for Engineering and Contingencies, but not including land, $131,000.00.

Bonds to the amount of $150,000.00 were issued to build the water

works plant, which seems to have been laid out on a scale wholly unwarranted by the present business development. There are at present in use but 277 services, and the revenue therefrom is but approximately from $2400.00 to $2600.00 per annum, which is not sufficient to pay the interest on the bonded indebtedness. Every effort is being made to reduce the maintenance and operating expense to the lowest limits in order that the deficiency in revenue may be overcome as far as possible.

ST. JOHNS WATER SUPPLY

The annexation of the town of St. Johns by vote at the election held June 7th was officially consummated on July 8, 1915, when the direction of affairs was assumed by the Mayor and Council.

The water supply of the City being in the hands of the St. Johns Water Works & Lighting Company, which for about 12 years has been operating under a franchise granted in 1903, the Water Bureau was not immediately affected by the transfer. It was but a few weeks, however, before petitions were presented to the Council asking that City water rates be granted to the St. Johns people.

In compliance with instructions received September 25th, the Engineer prepared a special report upon the value of the St. Johns Company plant for use of the City in furnishing a gravity supply of Bull Run water to the St. Johns district. This report was submitted on November 23rd.

The report placed the valuation of the entire plant of the St. Johns Company, including wells, pumps, reservoirs and water mains and general equipment now in use, at $130,000.00, this being the estimated "reproduction cost new."

The present depreciated value was estimated at $106,300.00, while the net value to the City for use in furnishing a gravity supply of Bull Run water was placed at $94,000.00. This latter estimate omitted certain items of land, pumps and boiler equipment valued at $12,750.00, not considered necessary to the operation of the plant as a part of the Portland municipal supply. It may be noted that this appraisement, while prepared 2½ years later, checks very closely with the Public Service Commission valuation, the depreciated value being placed at approximately $2,500.00 less than the Public Service valuation prepared in 1913.

In connection with the foregoing, an estimate was prepared of the cost of building a new system of pipes for the supply of the St. Johns district, connecting with the present City mains in adjacent territory; the mains to be of sizes slightly larger than those now in use in St. Johns.

Estimated cost, $124,000.00.

This estimate did not provide for furnishing standard mains throughout the entire district, but included a large amount of 2-inch pipe, which will furnish an ample domestic supply for many of the sparsely built up streets. The question of standard mains for fire protection purposes will have to be considered when the demand arises. The settlement of this question is now in the hands of the Council. It is expected that ultimately some arrangement will be made by which the City will take over at a fair valuation the water mains now owned by the St. Johns Company and operate same as a part of the Municipal system.

BULL RUN CONDUITS

Service has been maintained through Conduits No. 1 and No. 2 throughout the year. The repairs to Conduit No. 1, undertaken during

the year 1914, have not been continued during the past season. The work done last year covered the weakest points so far discovered, and few new pittings have since broken through, but other leaks will undoubtedly appear later.

An appropriation of $5000 has been requested for the continuance of the work of cleaning and recoating the pipe during the coming season. It is recommended that this work be continued from year to year until the entire line has been gone over so as to insure its continuance in service for at least another twenty years or more.

On December 25, 1914, a break occurred in the Little Sandy Power Flume of the Portland Railway, Light & Power Company at a point about 4800 feet east of the power station on the Bull Run river. This flume is a light timber construction, and from the first has required frequent repairs. The seepage from the flume has been large until quite recently, the Power Company having finally succeeded in calking the joints between the planking. The break in the flume mentioned above, which is situated upon the hillside above the pipe line, did not damage the conduits, the flow of water having followed a natural watercourse crossing over the pipe on a plank apron especially prepared to prevent possible undermining of the conduits.

In January a special report was submitted, calling attention to the frailty of the flume construction and the possible danger to the conduits resulting from breaks similar to those which have already occurred. While no serious damage has so far resulted, yet an element of danger will exist until the power flume is rebuilt in a more substantial manner or is removed to a new location remote from the vicinity of the City conduits.

Expenditures during the year on account of extra work made necessary by the flume repairs and the inspection and protection of pipe, $1398.75.

HEADWORKS

The keepers' residences, contracted for with Geo. A. Thompson in 1914, were completed early in the present year and final payment made thereon July 4th.

Amount expended during the year under this contract, $3282.50.

Total cost of buildings, not including grading of grounds around buildings, $9882.75.

The road construction undertaken last year was completed in February.

Total expenditure for material and labor, $10,238.60.

During November additional surveys were made, looking for a new location for dam and intake, for which a budget allowance of $100,000.00 has been made.

Revised plans and estimates are now in course of preparation, and it is hoped that they will be ready for commencement of construction operations early in the coming year.

BULL RUN RESERVE
SURVEYS AND EXPLORATIONS

During the past season a survey party was employed for a period of about three months (July 6th to Sept. 20th) in running out and marking the boundaries of the Bull Run and Little Sandy watersheds.

Length of miles surveyed, 74.1 miles.

Length of boundary of Bull Run watershed, 53.3 miles.

Length of boundary of Little Sandy watershed, 32.5 miles.

Length of boundary of combined Bull Run and Little Sandy watersheds, 65 miles.

Approximate area of Bull Run watershed, 102 square miles.

Approximate area of Little Sandy watershed, 23 square miles.

During October the field party was engaged upon a preliminary survey for a power plant on the Bull Run river, between Bull Run lake and the headworks.

Computation of area and plans and estimates for power plant project have not yet been completed.

Expenditures during the season on account of water shed survey	$3,790.00
On account of power plant survey	2,285.00
On account of new headworks	141.00
Total	$6,216.00

BULL RUN LAKE

Early in the year authority was granted to construct a low timber and rock fill dam across the high water outlet to Bull Run Lake for the purpose of determining the possibility of restraining or retarding the escape of the flood waters of the early spring. If this can be successfully accomplished, it is thought that it will solve the problem of providing necessary storage for Portland's water supply for a number of years.

The area of Bull Run Lake (over 440 acres in extent), with an available depth of even 20 feet, will provide a storage of over 25,000,000 gallons per day for a period of 100 days, or more than sufficient to tide over any low water period of which we have record. It is believed that a much greater depth, or at least 50 feet, will be available for storage as the lake is over 100 feet deep in the center. It is, therefore, thought to be well worth while to make a test during the coming winter and spring.

The dam referred to has been built to a height of 10 feet above ordinary high water in the lake at a cost of $1488.

This is intended as a temporary structure only.

There was also expended for the installation of measuring weirs and gages, etc., $759.00, and for a log cabin, built near the lake, a sum of $283.00 was expended, making $2540.00 as the cost of work done at Bull Run Lake, exclusive of trails.

It is noted that one of the most important things accomplished has been the installation of weirs and gages for securing a hydographic record of the flow from Bull Run Lake and at the head of Bull Run River, which will be of value in years to come.

TRAILS

During the time the survey crew was at work, and the construction of the dam and cabin at Bull Run Lake was in progress, a few men were employed making trails into different portions of the reserve in order to expedite the movement of men and supplies for the season's work and for future years as well.

This work has been done at such points as would fit in and connect with the trails heretofore built by the U. S. Forestry Service.

The result has been that a trail has been completed from the Headworks to Bull Run Lake, both along the northern and the southern borders of the Bull Run watershed.

Total expenditure for cleaning old trails and building about 11 miles of new trails during the year, $1963.00.

Total expenditure during the year account of surveys and explorations, etc., $10,719.00.

POWER PLANT DEVELOPMENT

During October and November a preliminary survey was made along the main Bull Run River, between Headworks and Blazed Alder Creek, for the purpose of determining the possibility of securing a hydro-electric power site, suitable for developing power for a municipal lighting plant.

Several reservoir sites and flume lines have been located tentatively, but the plans and estimates based on these locations have not yet been prepared. It may be said, however, that it now appears possible to secure the development of approximately 5000 H. P. within reasonable limits as to cost, etc.

SHAW-BATCHER COMPANY CLAIMS

In 1912 the Shaw-Batcher Company filed a suit in the U. S. District Court seeking to recover $199,134.13, with interest from November 4, 1911, which they claimed to be due them under their contract with the City for the construction of Conduit No. 2, the total claim amounting to approximately $240,000.00.

The case came to trial in February, in Judge Bean's court before a jury of 11 men, and continued until the end of March.

The taking of testimony was concluded March 31st, and after deliberating 21 hours the jury rendered a verdict on April 4th in favor of the plaintiff in the sum of $7,200.00 with interest, this sum being the amount retained by the City from the final estimate of the contractors on account of the delay in completing the work beyond the specified time, this deduction being authorized by the contract.

On May 26th the Council voted on an appropriation of $12,190.35 to cover the award in this case, including interest and plaintiff's costs, the plaintiff's attorneys having signified an acceptance of the award and the abandonment of an appeal.

In defending this suit the City incurred an expense of approximately $11,500.00 for engineers, attorneys, stenographers and witness fees, making a total cost of the defense approximately $23,700.00, or about 10 per cent of the original claim.

Under the circumstances, this verdict is regarded as a decided victory for the City, the contention of the City Attorney being sustained upon practically all points. The rulings of the Court in interpreting the contract also supported the views contended for by the Engineering staff in carrying on the work.

MOREHEAD SUIT

The suit of ejectiment filed by M. Morehead in April in the Circuit Court of Clackamas County, seeking to prevent the City from using the pipe line roadway across his property (the N. ½ of the S. W. ¼ of Sec. 34, T. 1 S. Range 5 E. W. M.) has been compromised, the City agreeing to pay the sum of $500.00 for a deed to a strip of land 100 feet wide following the line of the roadway now crossing the property. The city also agreed to permit Morhead to use the plank roadway from Bull Run P. O. The papers in this case have not yet been signed.

CHARACTER OF BULL RUN WATER

In the report from this office for the year 1914, reference was made to the analysis of Bull Run water and the report thereon forming a

part of Water Supply Paper No. 363, issued by the U. S. Geological Survey in 1914.

Extracts from this paper were given in the report for last year, and are repeated herein in part as follows:

"Bull Run River flows from a small lake formed by a morainal dam lying across an upland valley near Mt. Hood. The lake discharges through its surface outlet only at high stages, the usual outflow being by seepage through the boulders of the moraine. The outflowing stream flows northwestward a few miles, then southwestward to its junction with Sandy River. A long, low rise separates this basin from the Mt. Hood glaciers, and no glacial water reaches the river. The basin comprises 168 square miles, of which the greater part is heavily forested.

"The mean annual precipitation at Bull Run postoffice, which is 647 feet above sea level and above which there are 96 square miles of the drainage basin, is 76 inches. Much of this falls as snow in winter, but storage in the lake tends to equalize the run-off somewhat and to increase the volume of the low-water flow.

"The annual run-off from the drainage basin probably averages more than 100 inches in depth over the area.

"The quality of the water of this river is important because the City of Portland diverts water from it near the town of Bull Run through two lines of pipe for a municipal supply. The entire drainage basin above the intake of the pipe lines is included in the Bull Run Forest Reserve, and trespass is prevented by efficient policing. Because of the remoteness of upper Bull Run basin and the ideal sanitary conditions and effective patrol in it, Portland's water supply may be considered primarily pure and above criticism.

Character of the Water.

"Sample of water for analysis were collected daily during the period covered by the investigation through the courtesy of the Water Board of Portland. The water is always clear, largely because of lake storage and underground flow. It is very slightly mineralized and is not subject to great changes in mineral content, as shown by the following analyses:

"The water typically represents surface water flowing over igneous rocks in a heavily forested region of large rainfall. It is characterized by primary alkalinity as a result of its origin among volcanic rocks, and it is alkaline carbonate in type—that is, alkalies are present in excess of alkaline earths—and carbonate comprises more than 72 per cent of the acidic radicles. It is soft and non-scaling. One of the largest laundries in Portland finds it cheaper to buy Bull Run water from the City than to use the Willamette River water, which may be obtained without cost, the saving in cost of soap more than counterbalancing the cost of the water. The water will not corrode boilers or pipes as a result of its mineral content, but it may, unless first heated in an open heater, cause corrosion and rusting because of its content of dissolved carbon dioxide and oxygen. Any natural water of great mineral purity is likely to do the same, however, and it is by no means a peculiarity of Bull Run water. The water is very slightly colored and its appearance is exceptionally attractive. The pride of the City in its water supply appears to be amply justified by the facts."

In addition to the foregoing, a detailed analysis of each sample of water is given, showing the following averages:

	Parts per million
Turbidity	Tr.
Silica (Si0-2)	9.00
Iron (Fe)	.03
Calcium (Ca)	2.70
Magnesium (Mg)	.53
Sodium (Na)	3.10
Potassium (K)	.50
Bicarbonate radicle (HCO-3)	12.00
Sulphate radicle (SO-4)	3.10
Nitrate radicle (NO-3)	.31
Chlorine (C-1)	1.30
Total dissolved solids	30.00

In view of the statement, which even now appears in print at frequent intervals, to the effect that Bull Run water comes from the glaciers of Mt. Hood, atention is called to the above report which expressly states as follows: "A long, low rise separates this basin from the Mt. Hood glaciers, and no glacial water reaches the river."

BULL RUN WATERSHED

Table Showing "Run-off" By Years

(Discharges in Second-Feet)

	1910			1911			1912		
	Max.	Min.	Mean	Max.	Min.	Mean	Max.	Min.	Mean
January	4,520	244	1,010	5,080	408	933	10,400	160	2,090
February	4,272	191	933	1,120	260	480	4,240	561	1,560
March	9,490	545	2,090	1,340	240	700	583	270	416
April	2,060	510	970	1,050	388	601	1,070	416	577
May	1,550	244	619	2,680	622	1,150	1,580	494	869
June	555	182	249	942	298	460	811	311	477
July	191	91	132	396	135	203	444	132	238
August	102	80	88.7	142	83	117	1,640	92	249
September	91	72	83	784	80	260	1,220	156	421
October	1,340	171	426	926	148	335	1,630	215	630
November	4,100	180	1,350	5,230	126	1,610	4,520	394	1,410
December	2,120	328	1,050	1,880	388	851	4,270	463	1,070
For the year	9,490	72	749	5,230	80	642	10,400	92	838

	1913			1914			1915		
	Max.	Min.	Mean	Max.	Min.	Mean	Max.	Min.	Mean
January	4,610	489	1,300	5,230	274	1,470	2,480	285	781
February	2,870	359	853	2,240	473	1,000	1,240	376	719
March	5,980	326	1,150	2,480	551	1,130	1,110	407	632
April	1,680	711	1,260	2,480	520	1,030	1,640	218	576
May	1,590	594	1,120	541	256	407	1,730	182	610
June	1,000	390	647	853	274	414	655	267	388
July	760	180	357	260	100	152	865	221	337
August	178	107	141	102	72	86.5	215	92	133
September	847	107	247	841	72	307	115	74	86.8
October	2,800	129	698	2120	281	607	1,420	112	419
November	3,330	288	860	3,320	355	903	7,920	435	1,970
December	1,240	250	439	970	188	366			
For the year	5,980	107	755	5,230	72	656			

The foregoing table shows the mean "run-off" of Bull Run River for the years 1910 to 1915, inclusive, to range between 642 and 838 second-feet. It is also noted that the minimum flow of 72 second-feet, or 46½ million gallons per day, occurred in September, 1910, and also in Au-

gust and September, 1914, the lowest for 1915 being 74 second-feet in the month of September.

When it is considered that the average run-off from the main Bull Run River (over 600 second-feet) is over eight times the minimum flow during the low water period, which seldom exceeds 30 to 60 days, it will be seen at once that the main question involved is one of providing sufficient reservoir capacity for the storing of winter flood waters until the following dry season, the capacity of the water shed being ample to furnish a supply for a city of three million population, figured on a basis of 100 gallons per capita per day. This, however, would involve the general use of meters.

Surveys have already been commenced looking towards the location of the first storage unit in anticipation of the time when the demands of the city will exceed the supply furnished by the low water flow of Bull Run.

That this time is not remote is indicated by the conditions which were observed during the month of August of the present year, when during the warmest days, the consumption exceeded 40,000,000 gallons or about 90 per cent of the low water flow of the stream at that date.

This means that the construction of at least one storage basin should be undertaken within the next year or two. Surveys made at Bull Run Lake during the present season indicate the possibility of developing a considerable storage at that point at small expense. If upon further examination this plan is found to be feasible, the storage problem will be solved for a considerable period.

POPULATION SUPPLIED

The population of the city in 1910 was reported by the United States Census Bureau as 207,214.

The dwelling connections reported on December 31st, 1910, numbered 41,175. This gives an average of 5.03 persons supplied for each residence service installed throughout the entire city on that date.

Assuming "5" as a multiplier for the year 1915, and the service connections in use November 30th, 1915, as 51,236, this gives the population now supplied 256,000.

WATER CONSUMPTION

Total number of services listed as per Water Bureau ledgers, 58,926.
Number actually in use November 30th, 1914, 51,236.
Vacancies, shut-offs and discontinued services, 7,690.
Meters installed, all sizes, 15,495.
Average number in actual use, 14,624.

Total consumption through 14,624 metered services of all sizes, 2,940,000,000 gallons, or 8,054,000 gallons per day.

The following table shows the consumption in the several districts of the city:

CONSUMPTION THROUGH METERS 1914 AND 1915

DISTRICTS	FLATS		METERS		Av. Con. thru Meters. Gal. per day. All Services	Est'd. Pop. Supplied by Meters	Av. Gal. per Day per Capita thru Meters	Metered Residence Services only 1915			Av. Gal. per Day
WEST SIDE	1914	1915	1914	1915	1915	1915	1915	Services	Population	Per Day, Gal.	1914
*Low Gravity	7,483	4,198	3,077	3,663	4,089,400	18,315	223.3	1,381	6,905	33.0	236.5
High Gravity	3,138	2,651	2,259	1,909	990,300	9,545	103.8	1,543	7,715	40.9	92.3
Pump N. of Jefferson	.....	27	161	248	113,600	1,240	91.6	175	1,195	53.6	88.2
Pump S. of Jefferson	37	121	102	198	24,700	990	24.9	239	875	24.8	90.0
Portland Heights	.....	50	477	484	119,700	2,420	49.5	479	2,395	44.2	75.4
Council Crest	.....	13	40	62	11,600	310	37.4	57	285	24.8	69.2
*Burlingame Standpipe	.....	26	68	58	37,700	290	130.0	46	230	26.0	56.8
EAST SIDE											
Low Gravity	6,486	7,039	1,063	1,388	1,110,000	6,940	159.9	775	3,875	32.9	127.3
Intermediate Gravity	9,176	8,836	3,571	3,332	791,100	16,660	47.5	3,105	15,525	30.0	53.0
High Gravity, South of Division	6,063	6,217	116	593	88,800	2,965	30.0	545	2,725	18.3	44.6
High Gravity, North of Division	4,197	4,978	235	298	189,800	1,490	127.4	197	985	38.0	44.0
Vernon Standpipe	6,926	9,672	1,329	2,257	469,400	11,285	41.6	2,026	10,130	26.6	41.9
Pump, Tabor Heights	96	.....	87	134	17,800	670	26.6	131	655	26.6	75.3
Totals	43,602	43,828	12,585	14,624	8,053,900	73,120	110.1	10,699	53,495	32.2	111.6
Or, excluding East and West Side Low Gravity Service	13,969	11,237	4,140	5,051	5,199,400	25,255	.....	2,156	10,780	.....	.....
	29,633	32,591	8,445	9,573	2,854,500	47,865	59.6	8,543	42,715	31.8	64.1

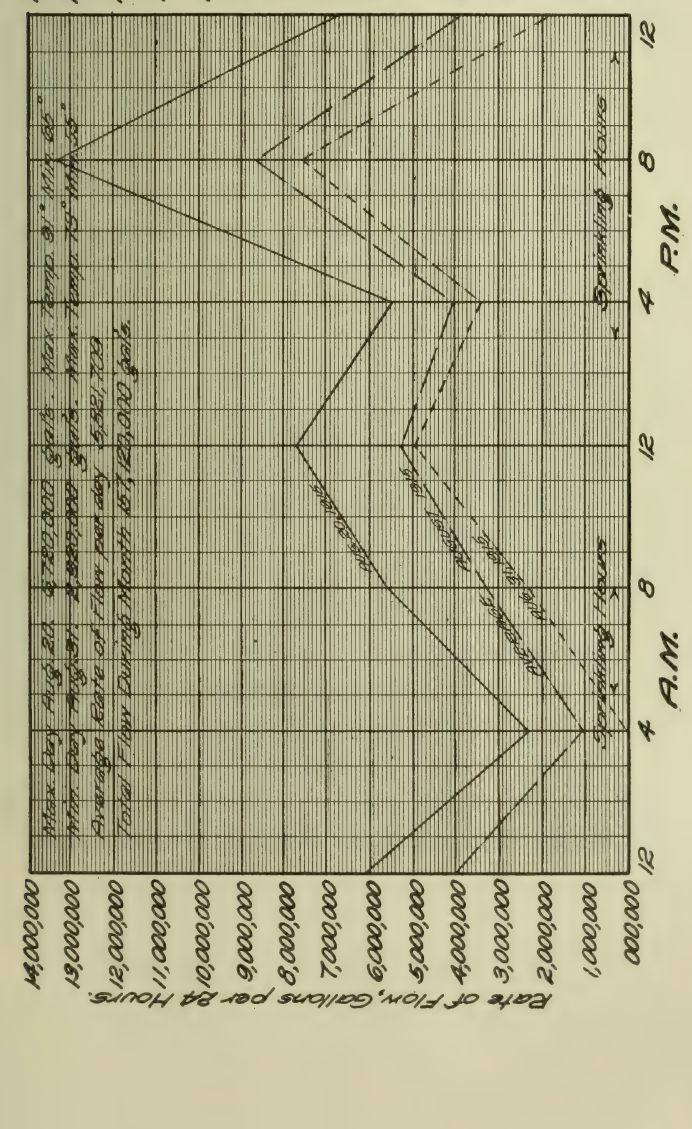
*West Side Low Gravity includes Linnton as one service.
*West Side Burlingame Standpipe includes Multnomah as one service.

From the foregoing comparison of the daily consumption in the several districts of the city, it is noted that there is a considerable variation in the amount used per day per capita, the highest rates being found in the low gravity, or the business districts of the East and West Sides of the River (223.3 gallons for the West Side and 159.9 gallons for the East Side), as was observed in 1914; the average of all metered services being 110.1 gallons per capita in 1915 as against 111.6 gallons per capita in 1914. Omitting the East and West Side low gravity districts, the per capita consumption of metered water in the remaining districts of the city is found to be 59.6 gallons in 1915 as against 64.1 gallons in 1914.

Attention is especially called to the consumption through meters attached to residences exclusively, as shown at the right-hand of the above table. It is to be noted that the consumption ranges from a maximum of 53.6 gallons to a minimum of 18.3 gallons per capita—the average being 32.2 gallons. This is an unusually favorable showing, although in excess of that shown for seven of the thirteen service districts of the city, and affords another demonstration of the regulative effect produced by the installation of meters.

Diagram No. 1 has been prepared from the readings of the 30-inch Venturi meter attached to the main supplying the East Side intermediate gravity service, showing the hourly consumption during the day of maximum and minimum flow for that district.

The minimum flow observed was on August 31st, 2,920,000 gallons; maximum temperature, 73 degrees. Maximum consumption, 6,720,000 gallons, on August 20th; maximum temperature, 91 degrees. Average daily consumption, 5,068,000 gallons.


WATER DEPARTMENT
PORTLAND, OREGON.
30" Meter, Reservoir No. 6
Rate of Water Consumption
MONTH OF AUGUST 1915.
Rate of Flow, Gallons per 24 Hours.
14,000,000
13,000,000
12,000,000
11,000,000
10,000,000
9,000,000
8,000,000
7,000,000
6,000,000
5,000,000
4,000,000
3,000,000
2,000,000
1,000,000
000,000
12
4
8
12
A.M.
4
8
12
P.M.

This diagram shows the "peak" load which usually occurs during the evening sprinkling hours, when the rate of consumption is more than double that at other hours of the day, and in consequence of this excessive demand the service often proves to be inadequate at the high points in the district. The more general use of meters will remedy this difficulty.

STATISTICS

The accompanying tables show the water mains laid in the several districts of the city during the year and the total mileage now in use.

A summary has also been prepared for the year ending November 30th, 1915, using therefor the form recommended by the New England Water Works Association for the compilation of data relating to water works maintenance and operation.

Respectfully submitted,

D. D. CLARKE, Engineer.

SUMMARY OF WATER MAINS IN USE NOVEMBER 30, 1915

Size Inches	WEST SIDE C. I.	WEST SIDE Steel or W. I.	WEST SIDE Total Miles	EAST SIDE C. I.	EAST SIDE Steel or W. I.	EAST SIDE Wood	EAST SIDE Total Miles
30	0.871	4.282	5.153	4.674	1.800	.....	6.474
24	2.289	4.630	6.919	7.030	2.481	.....	9.511
20	5.143	0.667	5.810	2.116	0.586	.....	2.702
18	0.089	0.596	0.685	.....	0.587	.....	0.587
16	4.181	.....	4.181	10.523	.....	.....	10.523
14	3.176	.....	3.176	3.469	.....	.....	3.469
12	13.876	1.088	14.964	16.930	.....	1.788	18.718
10	10.500	0.737	11.237	3.942	.....	0.297	4.239
8	23.892	0.276	24.168	138.391	.....	.....	138.391
7	.....	.....	.....	.....	.....	0.230	0.230
6	44.511	1.362	45.873	57.564	.....	1.188	58.752
5	.....	.....	.....	.....	.....	0.189	0.189
4	16.933	.....	16.933	16.022	1.111	3.584	20.717
Total 4" and over	125.461	13.638	139.099	260.661	6.565	7.276	274.502
3½	.....	.....	.....	.....	0.052	.....	0.052
3	0.567	0.514	1.081	.....	2.878	2.532	5.410
2½	.....	0.250	0.250	.....	1.199	0.313	1.512
2	.....	5.397	5.397	.....	34.631	1.599	36.230
1½	.....	0.311	0.311	.....	26.845	.....	26.845
1¼	.....	0.103	0.103	.....	8.935	.....	8.935
1	.....	0.846	0.846	.....	7.537	.....	7.537
¾	.....	0.393	0.393	.....	2.956	.....	2.956
½	.....	0.061	0.061	.....	1.105	.....	1.105
Total under 4"	0.567	7.875	8.442	.....	86.138	4.444	90.582
Total all sizes	126.028	21.513	147.541	260.661	92.703	11.720	365.084

SUMMARY OF WATER MAINS IN USE NOVEMBER 30, 1915—(Continued)

Size Inches	ALBINA C. I.	ALBINA Steel or W. I.	ALBINA Wood	ALBINA Total Miles	TOTALS C. I.	TOTALS Steel or W. I.	TOTALS Wood	TOTALS Total Miles
30	2.733	.....	.....	2.733	8.278	6.082	.....	14.360
24	2.985	.....	.....	2.985	12.304	7.111	.....	19.415
20	1.129	.....	.....	1.129	8.388	1.253	.....	9.641
18	.....	.....	.....	.....	0.089	1.183	.....	1.272
16	3.457	.....	.....	3.457	18.161	.....	.....	18.161
14	2.290	.....	.....	2.290	8.935	.....	.....	8.935
12	13.867	.....	.....	13.867	44.673	1.088	1.788	47.549
10	1.038	0.050	.....	1.088	15.480	0.787	0.297	16.564
8	81.474	0.263	0.339	82.076	243.757	0.539	0.339	244.635
7	.....	.....	.....	.....	.....	.....	0.230	0.230
6	31.728	2.150	0.023	33.901	133.803	3.512	1.211	138.526
5	.....	.....	.....	.....	.....	.....	0.189	0.189
4	6.795	3.298	.....	10.093	39.750	4.409	3.584	47.743
Total 4″ and over	147.496	5.761	0.362	153.619	533.618	25.964	7.638	567.220
3½	.....	.....	.....	.....	.....	0.052	.....	0.052
3	.....	0.794	.....	0.794	0.567	4.186	2.532	7.285
2½	.....	.....	0.757	0.757	.....	1.449	1.070	2.519
2	.....	22.374	0.293	22.667	.....	62.402	1.892	64.294
1½	.....	1.891	.....	1.891	.....	29.047	.....	29.047
1¼	.....	0.617	.....	0.617	.....	9.655	.....	9.655
1	.....	5.164	.....	5.164	.....	13.547	.....	13.547
¾	.....	1.118	.....	1.118	.....	4.467	.....	4.467
½	.....	0.099	.....	0.099	.....	1.265	.....	1.265
Total under 4″	.....	32.057	1.050	33.107	0.567	126.070	5.494	132.131
Total all sizes	147.496	37.818	1.412	186.726	534.185	152.034	13.132	699.351

BULL RUN CONDUITS

	Miles	Total Miles
CONDUIT NO. 1—HEADWORKS TO MT. TABOR		
42-inch steel (rivited)	10.022	.....
35-inch steel (riveted)	7.772	.....
33-inch steel (riveted)	6.505	24.299
CONDUIT NO. 2—HEADWORKS TO MT. TABOR		
52-inch steel (lock-bar)	10.018	.....
44-inch steel (lock-bar)	14.742	24.760
MT. TABOR TO CITY PARK		
24-inch steel (submerged)	0.387	.....
30-inch steel (submerged)	0.387	0.774
32-inch cast iron (shore connections)	6.020	.....
30-inch cast iron (shore connections)	0.437	6.457
Grand Total		56.290

SUMMARY OF STATISTICS FOR YEAR ENDING NOV. 30, 1915.

In Form Recommended by New England Water Works Association.

MUNICIPAL WATER WORKS

City of Portland, Multnomah County, State of Oregon.

GENERAL STATISTICS

Population by census of 1910, 207,214.
Date of construction, 1893-4. Additions in 1910-11.
By whom owned, the City of Portland.
Source of supply, Bull Run River.
Mode of supply, gravity and pumping.

PUMPING STATISTICS.

1—Builders of pumping machinery:
2 Reidler pumps, Fraser & Chalmers, Chicago, Ill.
1 1,000,000 gallons capacity per 24 hours.
1 500,000 gallons capacity per 24 hours.
3 Gould pumps, Gould Mfg. Co., Seneca Falls, N. Y.
1 540,000 gallons capacity in 24 hours.
1 220,000 gallons capacity in 24 hours.
1 250,000 gallons capacity in 24 hours.
1 Smith & Vaile, Platt Iron Works, Dayton, Ohio.
1 375,000 gallons capacity in 24 hours.
2 4-Stage Alberger Turbine Pumps, New York.
2 108,000 gallons capacity in 24 hours.
In reserve—
2 Dean Pumps, Holyoke, Mass.
2 108,000 gallons capacity in 24 hours.
3 Holly-Gaskell Compound Pumps, Holly Mfg. Co., Lockport, N. Y.
1 10,000,000 gallons capacity per 24 hours.
1 2,500,000 gallons capacity per 24 hours.
1 500,000 gallons capacity per 24 hours.
2 Worthington Pumps, Henry R. Worthington, N. Y
2 5,000,000 gallons capacity per 24 hours.

2—Description of fuel used—
(a) Kind: Wood and electricity.
(b) Brand of coal: Pelton wheel and electric motor for operating plants; cordwood for reserve plants.
(c) Average price of coal per gross ton, delivered, $.....
(d) Percentage of ash.....
(e) Wood: Price per cord, $.....

3—Coal consumed for the year.....pounds.

4—Pounds of wood consumed, divided by 3 equals equivalent amount of coal.....pounds.

5—Total equivalent coal consumed for the year (3)-(4).....lbs.

6—Total pumpage for the year, 342,000,000 gallons.

7—Average static head against which pumps work, 175 to 585 feet.

8—Average dynamic head against which pumps work, 150 to 570 feet.

9—Number of gallons pumped per pound of equivalent coal (5) .....pounds.

10—Duty-gallons pumped (6) x 8.34 pounds x 100 x dynamic head (8).....
Total fuel consumed (5).
Cost of pumping, figured on pumping station expense, $14,846.31.

11—Per million gallons pumped, $43.41.
12—Per million gallons raised one foot (dynamic), $.....

FINANCIAL STATISTICS

Receipts

Balance brought forward	$	20,266.09
(a) From ordinary (maintenance) receipts		
(b) From extraordinary receipts (bonds, etc.)		
Total	$	20,266.09
From Water Rates:		
A. Fixture rates	$	307,583.85
B. Meter rates		378,625.45
C. Total from consumers	$	686,209.30
D. For hydrants		
E. For fountains		
F. For street watering		
G. For public buildings		
H. For miscellaneous use		12,349.75
I. General appropriation		
J. Total from municipal departments		643.40
K. From tax levy		
L. From bond issues		561,975.56
M. From ohter sources		24,778.71
N. Total	$	1,306,222.81

Expenditures

Water Works Maintenance:		
AA. Operation (management and repairs)	$	189,456.64
BB. Special		
CC. Total maintenance	$	189.456.64
DD. Interest on bonds		307,985.00
(CC and DD)		
EE. Payment on bonds		
FF. Sinking fund		143,880.00
Water Works Construction:		
GG. Extension of mains, etc.		278,419.17
HH. Extension of services		10,894.18
II. Extension of meters		10,393.00
JJ. Special: Tools, equipment and stock material		4,674.73
Office and other buildings		6,699.05
Water Works property purchased		900.00
Improvements of real property		2,608.98
Reservoir No. 5		
Reservoir No. 6		
Lowering submerged pipes Nos. 1 and 2		
Clearing and roads		10,515.48
Bull Run Conduit No. 2 (S. B. Co.)		19,560.70
New Headworks		226.13
Surveys and explorations		12,,184.19
Improvement Bond Sinking Fund		181,861.21
KK. Total construction		538,936.82
LL. Unclassified expenses		16,054.03
MM. Balance (aa) ordinary		
(bb) extraordinary		
Net balance		109,910.32
N. Total	$	1,306,222.81
Disposition of balance:		
O. Net cost of works to date	$	12,186,930.21
P. Bonded debt at date		7,194,000.00
J. Payments into Sinking Fund to date		882,840.00
R. Average rate of interest		4, 5 and 6%

STATISTICS RELATING TO DISTRIBUTING SYSTEM

Mains

1—Kind of pipe: Cast iron, steel and wrought iron and wood.
2—Sizes: From 1 inch to 30 inches.

3—Extended: 4 inches and over in diameter, 27.193 miles; under 4 inches in diameter, 14.917 miles; total, 42.110 miles.
4—Discontinued, 14.038 miles.
5—Total now in use, 699.351 miles.
6—Cost of repairs per mile.
7—Number of leaks per mile.
8—Length of pipes, less than 4 inches in diameter, 132.131 miles.
9—Number of hydrants added during the year (public and private), 137.
Number added on mains owned by city, 127.
Number added on mains laid by private parties under city supervision, not yet taken over by city, 10; total, 137.
10—Number of hydrants (public and private) now in use (13 removed), 5,028.
11—Number of stop gates added during the year, 323.
Number added on mains owned by the city, 317.
Number added on mains laid by private parties under city supervision, not yet taken over by city, 6; total, 323.
12—Number of stop gates now in use, 6,886.
13—Number of stop gates, smaller than 4 inches in diameter, 628.
14—Number of blow-offs, 286.
15—Range of pressure on mains, 20 to 80 pounds.

Services

16—Kind of pipe: Galvanized iron.
17—Sizes:
18—Extended:.....feet.
19—Discontinued:.....feet.
20—Total now in use.....miles.
21—Number of service taps added during the year, 1,649.
22—Number now in use, 51,236.
23—Average length of service.....feet.
24—Average cost of service for the year, $.....
25—Number of meters added, 1,519.
26—Total in use, 15,495. Average number in actual use, 14,624.
27—Percentage of dwelling services metered, 22.28 per cent.
28—Percentage of receipts form metered water (B. C.), 55.2 per cent.
29—Number of motors and elevators added.....
30—Number now in use.....

Statistics of Consumption of Water

1—Estimated total population to date.....
2—Estimated population on lines of pipe.....
3—Estimated population supplied, 256,000.
4—Total consumption for the year, 12,034,000,000 gallons.
5—Total passed through meters, 2,940,000,000 gallons.
6—Percentage of consumption metered, 24.4 per cent.
7—Average daily consumption, 32,900,000 gallons.
8—Gallons per day to each inhabitant.....
9—Gallons per day to each consumer, 128.5 gallons.
10—Gallons per day to each tap, 642 gallons.
11—Cost of supplying water per million gallons, figured on total maintenance (Item CC), $15.74.
12—Total cost of supplying water per million gallons, figured on total maintenance, plus interest on bonds, $41.33

PIPE EXTENSIONS COMPLETED DURING THE FISCAL YEAR ENDING NOVEMBER 30, 1915

	WEST SIDE	Size (Inches)	Length (Feet)
July	E. L. City Park, Madison St. to Jefferson St. (steel)	8	296
	Jefferson St., E. L. City Park to Right of Way 834' South (steel)	8	834
	Right of way (Ford Street Bridge), Jefferson St. to Market St. (steel)	8	326
	Intersection branch on Market St.	6	11
	Intersection branch on Madison St.	8	10
August	15th St., Hoyt St. to Irving St.	8	208
	15th St., Overton St. to Pettygrove St.	8	296
	Intersection branch on Overton St.	6	33
	Hydrant connections	6	6
	Talbot Road, Patton Road to alley bet. Lots 5 and 9, Block F, Greenway	8	744
	Hydrant connections	6	12
Total			2776
	Hydrant connections included in above total		18

SUMMARY

Total length 6-inch pipe	.008 miles.
Total length 8-inch pipe	.514 "
Total	.522 miles.

PIPE EXTENSIONS LESS THAN 4 INCHES DIAMETER COMPLETED DURING THE FISCAL YEAR ENDING NOVEMBER 30, 1915

	WEST SIDE	Size (Inches)	Length (Feet)
December, 1914	Buckingham Ave., Cross Ave. to 440 ft. West of Elevator Ave.	2	905
	Dearborn Ave., Buckingham Ave. to Davenport St.	2	235
	Davenport St., Dearborn Ave. to E. L. Governor's Park	2	1745
	Total		2.85

SUMMARY

Size	Length
2-inch	0.546 miles.

PIPE ACQUIRED BY BILL OF SALE DURING THE FISCAL YEAR ENDING NOVEMBER 30, 1915

	WEST SIDE	Kind	Size	Length (Feet)
April	Nebraska St., Macadam St. to Bond St.	W. I.	1¼"	179
May	3rd St., Miles St. to 247 ft. North	"	1	247
	3rd St., 247 ft. to 496 ft. N. N. L. Miles St.	"	¾	249
	Total			675

SUMMARY

Size	Length
¾-inch	.047 miles
1 -inch	.047 "
1¼-inch	.034 "
Total	.128 miles

PIPE ACQUIRED BY ANNEXATION DURING THE FISCAL YEAR ENDING NOVEMBER 30, 1915

Street	Limits	Kind	Size	Length (Feet)
St. Helens Road, former Portland city limits to H St		C. I.	12	26,359
Waldemere Add.				
Wilark St., Hoge St. to 455 ft. North		"	4	455
Hoge St., Wilark St. to 255 ft. South		"	4	255
Alley (bet. Lots 8 and 9) St. Helens Road to Hoge and Wilark		"	4	265
Whitwood Court				
McKeon St., Harris St. to Mills St		W. I.	2	558
McKeon St., Harris St. to Springville Rd		C. I.	4	191
Bailey St., Mills to Springville Rd		W. I.	2	1,093
Shepard St., Mills St. to Springville Rd		"	2	1,015
Wood St., Mills St. to Springville Rd		"	2	1,034
Ogden St., Mills St. to Springville Rd		"	2	1,102
Mills St., McKeon to Bailey		"	2	200
Mills St., Ogden St. to Bailey St		C. I.	4	769
Mills St., Ogden St. to Whitney St		"	6	247
Springville Rd., McKeon St. to Ogden St		"	4	1,245
Springville Rd., Whitney St. to Ogden St		"	6	374
Linnton Add.				
1st St., "C" St. to "I" St		"	6	1,525
3rd St., "C" to "H" St		"	6	1,280
4th St., "C" to "H" St		"	6	1,263
"C" St., 1st St. to 2nd St		"	8	386
"C" St., 2nd St. to 3rd St		"	6	350
"C" St., 3rd St. to 4th St		"	6	204
"D" St., 2nd St. to 3rd St		W. I.	2	399
"E" St., 2nd St. to 3rd St		"	2	407
"F" St., 2nd St. to 3rd St		C. I.	8	405
"G" St., 2nd St. to 3rd St		W. I.	2	422
"H" St., 2nd St. to 3rd St		W. I.	2	380
"H" St., 1st St. to 2nd St		C. I.	6	373
Clark Terrace				
2nd St., "C" St. to S. L. Clark Ter. Add		C. I.	4	560
2nd St., S. L. Clark Ter. Add. to 210 ft. South		W. I.	2	210
3rd St., "C" St. to S. L. Clark Ter. Add		C. I.	4	546
4th St., "C" St. to S. L. Clark Ter. Add		"	4	598
S. L. Clark Terrace, 3rd St. to 4th St		"	4	294
Glenn Harbor Hts. Add.				
Willallitan Park et. al., Fes. No. 6 to Mount View Blvd		W. I.	2	980
Mountain View Blvd., Germantown Rd. to Hillside Blvd		"	2	3,250
Hillside Blvd., Mountain View Blvd. to Plymouth Ct		"	2	3,320
Glen Harbor Add.				
St. Helens Rd., N. L. Glen Harbor Add. to Alley bet. Lots 34 and 35, B. 1		W. I.	1½	350
St. Helens Rd., reducer bet. Lots 17 and 18, B. 1 to alley bet. Lots 34 and 35, B. 1		"	2	435
St. Helens Rd., reducer bet. Lots 17 and 18, B. 1, to Harbor Blvd		"	2½	360
St. Helens Rd., S. L. Glenn Harbor to Harbor Blvd		"	¾	446
Hardy Ave., S. L. Glenn Harbor to Harbor Blvd		"	1	270
Watts Ave., N. L. Lot 1, Blk. 5, to Harbor Blvd		"	1	200
Watts Ave., S. L. Lot 26, Blk. 4, to Harbor Blvd		"	¾	215
Alley in Blk. 3, Lot 10, Blk. 3, along E. L. Lot 11 to alley Lot 4, Blk. 3		"	¾	210
Raleigh Ave., Lot 17, Blk. 6, to alley bet. Lots 9 and 10, Blk. 6		"	1	400
Raleigh Ave., line bet. Lots 3 and 4, Blk. 6, to bet. Lots 9 and 10, Blk. 6		"	1½	310
Raleigh Ave., line bet. Lots 3 and 4, Blk. 6, to Harbor Blvd		"	2	350
Glenn Ave., Lot 14, Blk. 7, to Harbor Blvd		"	¾	275
Vista Ave., Lot 15, Blk. 8, to alley running North and South through B. 8		"	1½	400
Line bet. Lots 21 and 22, Blk. 10, St. Helens Rd., to Lot 25, Blk. 10		"	1	145
North and South alley in Blk. 3, Harbor Blvd., to East and West alley in Blk. 3		"	1	190
Germantown Rd., Vista Ave. to reservoir, Lot 1, Blk. 14		"	3	940
Vista Ave., Germantown Rd. to alley bet. Lots 5 and 6, Blk. 7		"	3	370
Alley bet. Lots 5 and 6, Blk. 7, Vista Ave. to Harbor Blvd		"	3	165
Harbor Blvd., alley bet. Lots 5 and 6, Blk. 7, to St. Helens Road		"	3	1,240
Germantown Road, Vista Ave. to Harbor Blvd		"	2	875
Germantown Road, South line Lot 6, Blk. 4, to Harbor Blvd		"	1¼	300
Germantown Road, South line Lot 6, Blk. 4, to Maybrook Ave		"	1	300

PIPE ACQUIRED BY ANNEXATION DURING THE FISCAL YEAR ENDING NOVEMBER 30, 1915—Continued

Street	Limits	Kind	Size	Length (Feet)
Willbridge Add.				
Addison Ave., St. Helens Road to Willsbridge Ave		"	1¼	255
Willbridge Ave., Addison Ave. to Lot 17, Blk. 11		"	1	279
St. Helens Road, "H" St. to 2,896 ft. North (est. 8" and 6", half each)		C. I.	8	1,448
St. Helens Road, "H" St. to 2,896 ft. North (est. 8" and 6" half each)		"	6	1,448
Willbridge Ave., St. Helens Road to Reservoir No. 7 (Pump Main)		"	6	2,200
Willbridge Ave., Reservoir No. 7 to Reservoir No. 8 (Pump Main)		"	6	2,300
Whitwood Court, St. Helens Rd. to Reservoir No. 3 (Pump Main)		"	8	300
Whitwood Court, Reservoir No. 3 to Reservoir No. 4 (Pump Main)		"	6	1,600
Willalatin, St. Helens Rd. to Reservoir No. 6 (Pump Main)		"	6	7,900
Linnton, St. Helens Rd. to Reservoir No. 1	(Pump Main)	"	8	500
Linnton, Reservoir No. 1 to Reservoir No. 2 (Pump Main)		"	6	1,100
North line Glenn Harbor, St. Helens Rd., to Reservoir Lot 1, Blk. 14, ..	(Pump Main)	"	4	1,375
Total				81,764

SUMMARY

Size	Length
¾-inch	0.217 miles
1 -inch	0.338 "
1¼-inch	0.105 "
1½-inch	0.201 "
2 -inch	3.036 "
2½-inch	0.068 "
3 -inch	0.514 "
4 -inch	1.241 "
6 -inch	4.197 "
8 -inch	0.576 "
12-inch	4.992 "
Total	15.485 "

PIPE EXTENSION COMPLETED DURING THE FISCAL YEAR ENDING NOVEMBER 30, 1915

	EAST SIDE	Size (Inches)	Length (Feet)
January	E. Washington St., E. 76th St. to E. 80th St	6	980
	Hydrant connections	6	12
February	E. 44th St., E. Stark St. to E. Halsey St	16	5,260
	Intersection branch on E. Oak St	8	20
	Intersection branch on E. Pine St	8	20
	Intersection branch on E. Ash St	8	20
	Intersection branch on E. Burnside St	8	20
	Intersection branch on E. Couch St	8	20
	Intersection branch on Laurelhurst Ave	8	20
	Intersection branch on Hazel Fern Place	8	20
	Intersection branch on Senate St	8	20
March	E. 80th St., E. Morrison St. to E. Yamhill St., looks East	8	237
	E. 80th St., E. Yamhill St., looks West to E. Taylor St., looks East	8	258
	E. 2nd St., Hawthorne Ave. to E. Market St	8	461
	Intersection branch on E. Clay St	6	74
	Hydrant connections	6	36
	E. 45th St., E. Lincoln St., to Division St	8	934
	Hydrant connections	6	6
April	E. 25th St., Oregon St. to Holladay Ave	8	475
	Hydrant connections	6	6
	E. 6th St., North line E. Clay St., to South line E. Clay St	8	60
	E. 8th St., North line E. Clay St. to South line E. Clay St	8	60
	E. 9th St., North line E. Clay St. to South line E. Clay St	8	60
	E. 10th St., North line E. Clay St. to South line E. Clay St	8	60
	E. 24th St., Oregon St. to Pacific St	6	200
	Hydrant connections	6	6
	E. 44th St., E. Lincoln St. to Division St	16	934
May	E. 23rd St., E. Irving St. to E. Hoyt St	6	228
	E. 19th St., Powell St. to Franklin St	6	213
	Hydrant connections	6	6
	E. 23rd St., Powell St. to Tibbets St	8	638
	Hydrant connections	6	6
	Tibbets St., E. 23rd St. to E. 25th St	8	508
	Hydrant connections	6	6
	Karl St., E. 10th St. to Milwaukie St	6	441
	E. 38th St., Ivon St. to Clinton St	6	222
	Intersection branch on Ivon St	6	17
June	E. 24th St., Holladay Ave. to Pacific St	6	251
	E. Grant St., E. 50th St. to 402 ft. West	6	402
	Hydrant connections	6	6
	E. 30th St., Holgate St. to Long Ave	8	465
	Hydrant connections	6	6
	Grand Ave., Woodward Ave. to Beacon St	8	905
	Intersection branch on Beacon St	8	30
	Hydrant connections	6	6
	Grand Ave., Beacon St. to Karl St	6	500
	Hydrant connections	6	12
	52nd St. S. E., 64th Ave. S. E., looking West, to 64th Ave. S. E., looking East	8	91
	64th Ave. S. E., 46th St. S. E. to 52nd St. S. E	8	1,724
	46th St. S. E., 64th Ave. S. E. to 65th Ave. S. E	8	149
	65th Ave. S. E., Lance Ave. to 46th St. S. E	8	161
	Lance Ave., 65th Ave. S. E. to County Road	8	4,870
	Hydrant connections	6	84
	County Road, Lance Ave. to County line	8	534
July	86th St. S. E., 18 ft. North South line to 10 ft. North North line 65th Ave. S. E	8	36
	Hydrant connections	6	6
	88th St. S. E., 18 ft. North South line to 44 ft. North North line 65th Ave. S. E	8	79
	Hydrant connections	6	6
	90th St. S. E., 18 ft. North South line to 10 ft. North North line 65th Ave. S. E	8	49
	Hydrant connections	6	6
	E. 71st St., E. Yamhill St. to E. Taylor St	6	256
	E. 19th St., Sandy Blvd. to E. Irving St	8	814

PIPE EXTENSION COMPLETED DURING THE FISCAL YEAR ENDING NOVEMBER 30, 1915—(Continued)

	Hydrant connections	6	6
	Center St., 18 ft. East West line to 8 ft. East East line Milwaukie	8	50
	E. Madison St., E. 41st St. to E. 43rd St	6	466
August	E. 50th St., E. Stark St. to North line Wallace Add	8	1,209
	Hydrant connections	6	18
	E. 22nd St., Sandy Blvd. to E. Irving St	6	373
	Hydrant connections	6	12
	E. 27th St., Sandy Blvd. to Pacific St	8	238
	Hydrant connections	6	6
September	E. 12th St., Powell St. to Frederick St	8	740
	Hydrant connections	6	12
	Frederick St., Milwaukie St. to E. 12th St	8	291
	E. Stark St., Brooke St. to E. 70th St	8	1,339
	Intersection branch on E. 67th St., looking North	6	34
	E. Stark St., intersection branch on Brooke St., looking North	6	37
	E. Stark St., 16 ft. West East line to 3 ft. West West line Brooke St.	6	37
	Hydrant connections	6	6
	Martin Ave., 14 ft. East West line Milwaukie St. to West line Milwaukie St	6	14
October	E. Kelly St., E. 39th St. to 550 ft. East	8	572
	Hydrant connections	6	12
	E. 39th St., Woodward Ave. to Tibbets St	8	499
	Intersection branch on Tibbets	8	41
	Hydrant connections	6	6
November	Glenn Ave., E. Lincoln St. to E. Grant St	8	238
	E. Grant St., Glenn Ave. to E. 34th St	6	516
	Hydrant connections	6	12
	E. 27th St., E. Flanders St. to Buxton St	6	443
	E. 47th St., E. Salmon St. to E. Madison St	8	700
	Hydrant connections	6	6
	E. Madison St., E. 47th St. to 106 ft. East	8	106
	Total		32,051
	Hydrant connections included in above		312

SUMMARY

6-inch pipe	1.080 miles
8-inch	3.758 "
16-inch pipe	1.173 "
Total	6.011 miles

PIPE EXTENSIONS LESS THAN 4 INCHES DIAMETER COMPLETED DURING THE FISCAL YEAR ENDING NOVEMBER 30, 1915

	EAST SIDE	Size (inches)	Length (feet)
December 1914	59th St. S. E., 404 ft. to 604 ft. South South line 45th Ave. S. E.	2	200
	60th Ave. S. E., 67th St. S. E. to 69th St. S E	2	658
	69th St. S. E., 60th Ave. S. E. to 61st Ave. S. E.	2	225
	Intersection branch on 60th Ave. S. E., looking East	2	73
	58th Ave. S. E., 67th St. S. E. to 69th St. S. E	2	713
	41st Ave. S. E., 60th St. S. E. to 62nd St. S. E	2	707
	43rd Ave. S. E., Foster Road to 62nd St. S. E.	2	380
	44th Ave. S. E., 58th St. S. E. to 59th St. S. E	2	322
	61st St. S. E., 45th Ave. S. E. to Foster Road	2	452
	E. 80th St., E. Salmon St. to E. Main St.	2	180
	E. Main St., E. 78th St. to E. 80th St	2	426
	Bismark St., E. 21st St. to E. 22nd St	2	189
	39th Ave. S. E., E. 48th St. to E. 49th St	1½	144
	64th St. S. E., 52nd Ave. S. E. to 55th Ave. S. E.	2	897
	68th St. S. E., 55th Ave. to 235 ft. South South line 55th Ave	2	253
	57th Ave. S. E., 67th St. S. E. to 69th St. S. E	2	639
	69th St. S. E., 57th Ave. S. E. to 165 ft. North	2	204
	62nd Ave. S. E., 67th St. S. E. to 69th St. S. E.	2	675
	63rd Ave. S. E., 67th St. S. E. to 69th St. S. E	2	582
	67th St. S. E., 62nd Ave. S. E. to 64th Ave. S. E.	2	552
January	Reynolds Ave., E. 9th St. to Milwaukie Ave.	2	890
1915	51st St., S. E., 30th Ave. S. E. to 31st Ave. S. E.	1½	240
February	Hassalo St., E. 58th St. to E. 60th St	2	485
	E. 58th St., Hassalo St. to 280 ft. North North line Hassalo St	2	319
	E. 59th St., 94 ft. North North line Hassalo to 200 ft. South South line Hassalo	2	354
	E. Yamhill St., E. 71st St. to E. 73rd St.	2	593
	E. Alder St., E. 80th St. to E. 84th St.	2	1,112
March	76th St. S. E., 40th Ave. S. E. to 45th Ave. S. E.	2	1,284
	E. 23rd St., Tacoma Ave. to Sherrett St.	2	1,017
	Broadway St., E. 77th St. to 107 ft. West West line E. 77th St.	2	146
	Intersection branch on E. 77th St.	2	42
	Nehalem Ave., E. 19th St. to E. 23rd St.	2	920
	Ochoco St., E. 9th St. to E. 10th St.	2	254
	Intersection branch on E. 9th St.	2	26
	E. 10th St., Ochoco St. to 100 ft. North	2	116
	E. 33rd St., Francis Ave. to 370 ft. North	2	410
	E. 87th St., E. Glisan St. to 792 ft. North	2	792
	E. 33rd St., 370 ft. to 548 ft. North of Francis Ave.	1½	178
April	Hawthorne Ave., E. 76th St. to E. 80th St.	2	1,065
	79th St. S. E., 40th Ave. S. E. to 45th Ave. S. E.	2	1,304
	45th Ave. S. E., 79th St., looks North to 79th St., look. South	1½	152
	Lucky Ave., E. 62nd St. to East line Lot 4, Blk. "U," Tabor Hts.	2	443
May	E. Washington St., E. 74th St. to E. 76th St.	2	346
	Franklin St., E. 19th St. to S. P. Co. right of way	2	367
June	E. 14th St., Linn Ave. to 163 ft. South	2	185
	57th St. S. E., 42nd Ave. S. E. to 44th Ave. S. E.	2	384
	58th St. S. E., 42nd Ave. S. E. to 44th Ave. S. E.	2	384
	44th Ave. S. E., 44 ft. West West line 57th St. S. E. to 58th St. S. E.	2	343
	E. 37th St., 9 ft. North North line to 87 ft. South South line Liebe St.	2	146
	Alley (W. L. Gilham's 2nd Add.) E. Grant St. to E. Sherman	2	250
	Brooklyn St., E. 6th St., looks North, to E. 6th St., looks South	2	120
	E. 6th St., Brooklyn St. to 330 ft. South	2	343
	71st Ave. S. E., 87th St. S. E. to 92nd St. S. E.	2	1,378
July	E. Alder St., E. 71st St. to E. 73rd	2	466
	Yukon Ave., Milwaukie to E. 14th St.	2	575
	41st St. S. E., 48th St. S. E. to 128 ft. East of 49th St. S. E.	2	389
August	E. 59th St., Halsey St. to 330 ft. North	2	388
Sept	50th Ave. S. E., 80th St. S. E. to 82nd St. S. E.	2	522
	Mall St., E. 37th St. to E. 39th St.	2	510
October	Martins Ave., Milwaukie St. to 35 ft. East East line East 13th St.	2	805
Nov.	E. Clay St. (Ext.), 296 ft. East East line E. 37th St. to E. 38th St.	2	143
	43rd Ave. S. E., 67th St. S. E. to 72nd St. S. E.	2	1,321
	64th Ave. S. E., 52nd St. S. E. to 436 ft. East	2	448
Total			30,426

SUMMARY

1½-inch	0.135 miles
2 -inch	5.627 "
Total	5.762 miles

PIPE ACQUIRED BY BILL OF SALE DURING THE FISCAL YEAR ENDING NOVEMBER 30, 1915

	EAST SIDE	Kind	Size (inches)	Length (feet)
June	E. 58th St., Sacramento St. to 359 ft. North	W. I.	2	359
	E. 58th St., Thompson to 180 ft. South South line Tillamook	"	2	613
September	E. 81st St., Beech St. to Shaver St.	"	2	957
	E. 79th St., Beech St. to 184 ft. North	"	2	221
Total				2,150

SUMMARY

2-inch	0.407 miles

PIPE EXTENSIONS COMPLETED DURING THE FISCAL YEAR ENDING NOVEMBER 30, 1915

	ALBINA	Size (inches)	Length (feet)
December	Webster St., 7 ft. South South line to 17 ft. North South line Albina	6	24
1914	Ainsworth Ave., Campbell St. to Denver Ave	8	262
	Campbell St., Ainsworth Ave. to Colfax St	6	514
	Hydrant connections	6	6
February	Vancouver Ave., Mason St. to Skidmore St	6	480
1915	E. 20th St., 18 ft. South North line Prescott St. to South line Prescott	8	42
April	E. 47th St., Fremont St. to The Alameda	6	2,109
	Hydrant connections	6	18
	E. 48th St., Siskiyou St. to The Alameda	6	1,121
	Hydrant connections	6	6
	E. 49th St., Siskiyou St. to The Alameda	6	1,121
	Hydrant connections	6	12
	Bryant St., E. 15th St. to E. 17th St	8	437
May	Boston Ave., Lombard St. to Buffalo St	6	654
	Hydrant connections	6	6
	Russett St., Peninsular Ave. to Burrage St	6	566
	Hydrant connections	6	6
	Grand Ave., 20 ft. South North line to South line Dekum Ave	6	54
June	Church St., Union Ave. to E. 9th St	8	1,327
	Hydrant connections	6	12
July	E. 66th St., Siskiyou St. to Fremont St	8	1,022
	E. 12th St., intersection of Ainsworth Ave	8	17
	E. 12th St., 4 ft. South South line to 26 ft. North South line Ainsworth Ave	6	30
	City property, Vernon Standpipe to Skidmore St	30	396
	Skidmore St., E. 20th St. to E. 33rd St	30	3,729
	E. 33rd St., Skidmore St. to Prescott St	30	318
	Prescott St., E. 33rd St. to E. 37th St	30	1,325
	E. 37th St., Prescott St., looks West, to Prescott, looks East	30	138
	Prescott St., E. 37th St. to E. 42nd St	30	1,289
	Right of way, E. 42nd St. to E. 57th St. (extended)	30	4,143
	E. 57th St. (ext.), right of way to Fremont St	30	2,634
	Fremont St., E. 57th St. to E. 59th St., looks North	30	458
	Wistaria Ave., E. 51st St. to E. 54th St	6	976
	Hydrant connections	6	6
	E. 54th St., The Alameda to Sandy Blvd	6	345
	Hydrant connections	6	6
August	Sumner St., E. 13th St. to right of way 340 ft. East	6	393
	Hydrant connections	6	6
	Klickitat St., E. 72nd St. to E. 80th St	8	2,080
	Hydrant connections	6	24
	Wygant St., Denver Ave. to Gay St	8	588
	Hydrant connections	6	6
August	E. 28th St., Tillamook St. to Thompson St	8	653
	Hydrant connections	6	6
	Shaver St., Capitol St. to Commercial St	8	3,582
	Intersection branch on Borthwick St	8	60
September	Ainsworth Ave., E. 30th St. to E. 33rd St	8	1,096
	Hydrant connections	6	12
	E. 33rd St., Ainsworth Ave. to Killingsworth Ave	12	1,313
	Hydrant connections	6	12
	Killingsworth Ave., Glenn Ave. to E. 33rd St	12	274
	Hydrant connections	6	6
	Union Ave., Alberta St. to Knott St., looks East	12	6,221
	Union Ave., Knott St., looks East. to Knott St., looks West	10	77
	Intersection branch on Going St., looks East	8	59
	Intersection branch on Graham St., looks West	6	14
	Intersection branch on Monroe St., looks West	6	19
	Intersection branch on Fargo St., looks West	6	19
	Hydrant connections	6	78
	Killingsworth Ave., Patton Ave. to Denver Ave	12	1,271
	Intersection branch on Campbell St	8	49
	Hydrant connections	6	6
	Sumner St., Concord St. to Denver Ave	8	598

PIPE EXTENSIONS COMPLETED DURING THE FISCAL YEAR ENDING NOVEMBER 30, 1915—Continued

	Hydrant connections	6	6
	Dwight St., Lombard St. to Kilpatrick St	8	1,139
	Hydrant connections	6	12
	Skidmore St., Union Ave. to E. 19th St	24	4,025
	Intersection branch on E. 19th St., looks South	12	27
	City property, Vernon Standpipe to Skidmore St	24	410
	Skidmore St., 23 ft. Ea East line E. 19th St. to 208 ft. East East line E. 19th St	20	185
November	Baldwin St., 18 ft. West East line to 8 ft. East East line Peninsula	8	26
	Haven St., Lombard St. to Willis Blvd	8	1,240
	Hydrant connections	6	12
	Total		51,213
	Hydrant connections included in above		252

SUMMARY

6-inch	1.600	miles
8-inch	2.704	"
10-inch	0.015	"
12-inch	1.725	"
20-inch	0.035	"
24-inch	0.842	"
30-inch	2.733	"
Total	9.654	"

PIPE EXTENSIONS LESS THAN 4 INCHES DIAMETER COMPLETED DURING THE FISCAL YEAR ENDING NOVEMBER 30, 1915

	ALBINA	Size (inches)	Length (feet)
December...	Webster St., Albina Ave. to Kerby St.	2	447
1914	Campbell St., Holman St. to Highland Ave.	2	340
February...	Omaha Ave., Ainsworth Ave. to Portland Blvd.	2	1,234
1915	Lombard Ave., Rodney Ave. to 300 ft. East of Mallory	2	743
	Highland St., E. 13th St. to E. 17th St.	2	888
March.....	Liberty St., E. 8th St. to Durham Ave.	2	435
April.....	E. 36th St., 266 ft. to 348 ft. South South line Prescott	2	152
	Portland Blvd., Grand Ave. to E. 6th St.	2	259
	Grand Ave., Portland Blvd. to 169 ft. South South line Portland Blvd.	2	186
	E. 15th St., Bryant St. to Morgan St.	2	341
May.....	Boston Ave., Buffalo St. to Bryant St.	2	662
	Alberta St., Gay St. to 371 ft. West	2	386
	Grand Ave., Dekum Ave. to Madrona St.	2	318
June.....	Borthwick St., Portland Blvd. to 496 ft. North	2	571
	E. 18th St., 203 ft. South of Holman, to Ainsworth Ave.	2	590
	E. 19th St., Ainsworth Ave. to Holman St.	2	805
July.....	Kerby St., Portland Blvd. to 490 ft. North	2	518
	E. 12th St., 4 ft. South South line Ainsworth Ave. to 95 ft. North North line Jarrett	2	481
	E. 12th St., 10 ft. South North line Killingsworth Ave. to 38 ft. South South line Church	2	133
August.....	Right of way bet. E. 13th St. and Vernon Ave., Sumner, looks East to Sumner, looks West	2	110
	Sumner St., Vernon Ave. to 105 ft. West	2	139
	Wygant St., Gay St. to Delaware Ave.	2	660
	Peninsular Ave., Houghton St. to Columbia Slough Road	2	576
October.....	Humboldt St., Gay St. to Delaware St.	2	533
	Church St., Patton St. to Campbell St.	2	1,020
November..	E. 8th St., Holland St. to Madrona St.	2	1,118
	Baldwin St., Peninsular Ave. to Burrage St.	2	511
	Humboldt St., Michigan Ave. to Mississippi Ave.	2	346
	Mississippi Ave., Humboldt St. to Blandena St.	2	522
	Haven St., Willis Blvd. to Houghton St.	2	857
Total			15,881

SUMMARY

2-inch pipe..... 3.008 miles

PIPE ACQUIRED BY BILL OF SALE DURING THE FISCAL YEAR ENDING NOVEMBER 30, 1915

ALBINA	Kind	Size (inches)	Length (feet)
December..Buffalo St., 387 ft. to 423 ft. East East line E. 17th St.....	W. I.	2	36
E. 18th St. (ext.), Buffalo St. to Columbia Blvd.....	"	2	829
Columbia Blvd., E. 18th St. to 146 ft. East.....	"	2	146
February...E. 63rd St., Shaver St. to Prescott St.....	"	2	1,227
April.....Webster St., Patton Ave. to 231 ft. West.....	"	¾	231
Knott St., E. 33rd St. to 63 ft. West.....	"	1	130
Knott St., 63 ft. West West line E. 33rd St. to 52 ft. East of Glenn Ave.....	"	¾	128
Lombard St., 81 ft. to 454 ft. West West line E. 8th St.....	"	1	373
Total.....			3,100

SUMMARY

Size	Length
¾-inch.....	0.068 miles
1 -inch.....	0.095 "
2 -inch.....	0.424 "
Total.....	0.587 miles

RECAPITULATION

Pipe Extensions Completed During the Fiscal Year Ending November 30, 1915 (By Department Forces)

Size	West Side Miles	East Side Miles	Albina Miles	Total Miles
1½-inch.....	.....	0.135	.....	0.135
2 -inch.....	0.546	5.627	3.008	9.181
	0.546	5.762	3.608	9.316
6 -inch.....	0.008	1.080	1.600	2.688
8 -inch.....	0.514	3.758	2.704	6.976
10 -inch.....	.....	.....	0.015	0.015
12 -inch.....	.....	.....	1.725	1.725
16 -inch.....	.....	1.173	.....	1.173
20 -inch.....	.....	.....	0.035	0.035
24 -inch.....	.....	.....	0.842	0.842
30 -inch.....	.....	.....	2.733	2.733
	0.522	6.011	9.654	16.187

Pipe Extensions Acquired by Bill of Sale During the Fiscal Year Ending November 30, 1915

Size	West Side Miles	East Side Miles	Albina Miles	Total Miles
¾-inch.....	0.047	.....	0.068	0.115
1 -inch.....	0.047	.....	0.095	0.142
1¼-inch.....	0.034	.....	.....	0.034
2 -inch.....	.....	0.407	0.424	0.831
	0.128	0.407	0.587	1.122

Pipe Extensions Acquired by Annexation During the Fiscal Year Ending November 30, 1915

"LINNTON DISTRICT"

Size "LINNTON DISTRICT"	West Side Miles	East Side Miles	Albina Miles	Total Miles
¾-inch	0.217	.....	.....	0.217
1 -inch	0.338	.....	.....	0.338
1¼-inch	0.105	.....	.....	0.105
1½-inch	0.201	.....	.....	0.201
2 -inch	3.036	.....	.....	3.036
2½-inch	0.068	.....	.....	0.068
3 -inch	0.514	.....	.....	0.514
4 -inch	1.241	.....	.....	1.241
6 -inch	4.197	.....	.....	4.197
8 -inch	0.576	.....	.....	0.576
12 -inch	4.992	.....	.....	4.992
	15.485	.....	.....	15.485

TOTALS

Size	West Side Miles	East Side Miles	Albina Miles	Total Miles
¾-inch	0.264	.....	0.068	0.332
1 -inch	0.385	.....	0.095	0.480
1¼-inch	0.139	.....	.....	0.139
1½-inch	0.201	0.135	.....	0.336
2 -inch	3.582	6.034	3.432	13.048
2½-inch	0.068	.....	.....	0.068
3 -inch	0.514	.....	.....	0.514
4 -inch	1.241	.....	.....	1.241
6 -inch	4.205	1.080	1.600	6.885
8 -inch	1.090	3.758	2.704	7.552
10 -inch	.....	.....	0.015	0.015
12 -inch	4.992	.....	1.725	6.717
16 -inch	.....	1.173	.....	1.173
20 -inch	.....	.....	0.035	0.035
24 -inch	.....	.....	0.842	0.842
30 -inch	.....	.....	2.733	2.733
	16.681	12.180	13.249	42.110

PIPE ABANDONED OR REMOVED DURING THE FISCAL YEAR ENDING NOVEMBER 30, 1915

WEST SIDE	Size (inches)	Kind	Length (feet)
Fairmount Blvd., 161 ft. South of 8 in. gate to Wapato Ave., S. 70 ft.	8	C. I.	70
Fairmount Blvd., cross at steps at Wapato to 166 ft. North	4	"	166
Fairmount Blvd., 8" gate South of steps to Wapato Ave. to 161 ft. S.	8	"	161
Burnside St., 20 ft. East West line 12th St. to 19 ft. West East line 12th	6	"	21
15th St., North line Hoyt St. to South line Irving	4	"	200
15th St., South line Pettygrove St. to 35 ft. South South line Overton	4	"	295
Aspen St., bet. Franklin St. and Thurman St. (ext.)	1¼	W. I.	342
Washington St., 23rd St. to Brooke St	4	C. I.	460
Ford St., Madison St. to Market St. Drive	6	W. I.	480
Jefferson St., Reservoir No. 4 to Ford St. Bridge	6	"	1,112
(Drive way (City Park) Power House to Head of Jefferson (Note—This was found to be 8", but was always listed as 6").	6)	"	257
Drive way (City Park) Power House to Head of Jefferson	6	"	111
Drive way (City Park) Power House to Head of Jefferson	4	"	50
Total			3,725

SUMMARY

Size	C. I. Miles	Steel-W. I. Miles	Wood Miles	Total Miles
1¼-inch		0.065		0.065
4 -inch	0.212	0.009		0.221
6 -inch	0.004	0.371		0.375
8 -inch	0.044			0.044
	0.260	0.445		0.705

PIPE ABANDONED OR REMOVED DURING THE FISCAL YEAR ENDING NOVEMBER 30, 1915—(Continued)

EAST SIDE	Size	Kind	Length (feet)
79th St. S. E., 40th Ave. S. E. to 45th Ave. S. E	2	Wood	902
40th Ave. S. E., 60th St. S. E. to 62nd St. S. E	1	W. I.	507
50th Ave. S. E., E. 80th St. to 28 ft. East East line E. 80th St	2½	"	64
Gladstone Ave., 15 ft. West West line E. 26th St. to 44 ft. West West line 26th St	2	"	29
E. 56th St., 19 ft. North South line Powell to 7 ft. North North line Powell	2	"	48
E. 71st St., 20 ft. North North line E. Taylor St. to 101 ft. North North line Taylor	2	"	81
61st St. S. E., 46th Ave. S. E. to 47th Ave. S. E	1½	"	190
64th Ave. S. E., 50th St. S. E. to 25 ft. East West line 51st St. S. E	1½	"	155
41st Ave. S. E., 48th St. S. E. to 140 ft. East East line 48th St	1½	"	161
Alley (bet. E. 64th and E. 65th Sts.) 40th Ave. to 45th Ave. S. F	1½	"	1,375
40th Ave., 34 ft. to 180 ft. West West line E. 58th St	1½	"	146
E. 51st St., 32nd Ave. to 60 ft. North North line 32nd Ave	1½	"	60
33rd Ave., E. 49th St. to E. 50th St	1½	"	255
34th Ave., E. 49th St. to 10 ft. East West line 50th St	1½	"	265
E. Kelly St., E. 39th St. to 154 ft. East East line 39th St	1¼	"	154
43rd Ave., West line to 263 ft. West West line E. 70th St	1¼	"	263
43rd Ave., East line to 240 ft. East East line, E. 70th St	1¼	"	240
37th Ave., East line, to 192 ft. East East line E. 54th St	1¼	"	192
37th Ave., 5 ft. to 105 ft. East East line E. 52nd St	1¼	"	100
E. Kelly St., 154 ft. to 318 ft. East East line E. 39th St	1	"	164
43rd Ave., 263 ft. to 369 ft. West West line E. 70th St	1	"	106
43rd Ave., 240 ft. East East line E. 70th St. to 20 ft. West East line E. 72nd St	1	"	220
Mall St., E. 37th St. to E. 39th St	1	"	456
E. 79th St., 57 ft. to 135 ft. North North line 45th Ave	1	"	78
E. Kelly St., 318 ft. to 513 ft. East East line E. 39th St	¾	"	191
E. 58th St., 12 ft. North South line to 94 ft. North North line 44th Ave	¾	"	132
E. 10th St., 4 ft. South South line to 16 ft. North South line E. Clay	4	C. I.	20
E. 8th St., 8 ft. South South line to 8 ft. North North line E. Clay St	4	"	76
E. 46th St. S. E., 64th Ave. S. E. to 65th Ave. S. E	6	Wood	147
65th Ave. S. E., Lance Ave. to E. 46th St	6	"	174
Lance Ave., 65th Ave. to 72nd Ave	6	"	1,703
72nd Ave. S. E., 14 ft. West East line to 12 ft. West West line Lance Av	6	"	58
50th Ave. S. E., 80th St. to 82nd St	4	"	191
Lance Ave., 72nd Ave. to Abington St	6	"	1,000
50th Ave. S. E., 80th St. to 82nd St	3	"	206
89 ft. South South line 37th Ave., 13 ft. East West line to 95 ft. East East line E. 72nd St	2	"	132
Bet. E. 76th and E. 79th Sts., 40th Ave. to 124 ft. North North line of 45th Ave	2	"	1,149
249 ft. East East line 74th St., 12 ft. North South line 40th Ave. to 295 ft. North North line 45th Ave	2	"	978
E. 100th St., 31 ft. South North line to 74 ft. South North line 67th Ave.	2	"	43
37th Ave., 107 ft. West West line E. 67th St. to 104 ft. West West line E. 68th St	2	W. I.	266
E. 71st St., E. Taylor St. to E. Yamhill St	2	"	252
E. 80th St., E. Taylor St. to E. Morrison St	2	"	583
Gladstone Ave., 20 ft. East West line E. 25th St. to 44 ft. West West line E. 26th St	2	"	186
E. 25th St., Gladstone Ave. to 95 ft. North North line Holgate	2	"	1,025
E. 66th St., 19 ft. North South line to 10 ft. North North line 55th Ave	1½	"	51
E. 51st St., 30th Ave. to 32nd Ave	1½	"	484
Grand Ave., Karl St. to Beacon St	1½	"	500
E. 23rd St., 15 ft. South North line to 140 ft. South South line Tibbets	1½	"	220
64th Ave. S. E., 50th St. S. E. to 77 ft. West West line 52nd St. S. E	1½	"	553
86th St. S. E., 19 ft. North South line to 11 North North line 65th Ave	1½	"	53
72nd St. S. E., 20 ft. North South line to 14 ft. South North line 43rd Ave. S. E	1¼	"	22
Grand Ave., 278 ft. to 378 ft. South South line Brooklyn St	1¼	"	100
E. 6th St., Brooklyn St. to 450 ft. South	1¼	"	450
Brooklyn St., 37 ft. West East line to 125 ft. East East line Grand Ave.	1¼	"	162
Grand Ave., South line to 278 ft. South South line Brooklyn St	1¼	"	278
41st Ave., E. 48th St. to E. 49th St	1¼	"	199

PIPE ABANDONED OR REMOVED DURING THE FISCAL YEAR ENDING NOVEMBER 30, 1915—(Continued)

EAST SIDE	Size	Kind	Length (feet)
E. 88th St., 19 ft. North South line 65th Ave. to 44 ft. North North line 65th Ave	1¼	"	88
211 ft. West West line E. 100th St., 30 ft. South North line to 70 ft. North North line 67th Ave	1¼	"	100
Mall St., E. 37th St. to E. 39th St	1	"	456
Glenn Ave., E. Lincoln St. to E. Grant St	1	"	240
43rd Ave., E. 67th St. to 369 ft. West West line E. 70th St	1	"	390
43rd Ave., 18 ft. West East line to 20 ft. West West line E. 72nd St	1	"	52
43rd Ave., West line to East line E. 70th St	1	"	50
E. Madison St., E. 41st St. to 36 ft. West West line E. 43rd St	1	"	376
Hassalo St., E. 58th St. to E. 60th St	1	"	485
E. 87th St., North line E. Glisan St. to 792 ft. North	1	"	792
E. 30th St., Holgate St. to 444 ft. South	1	"	460
E. 28th St., Karl St. to Powell St	1	"	268
Powell St., E. 28th St. to E. 29th St	1	"	570
E. Alder St., E. 80th St. to 32 ft. West West line E. 82nd St	1	"	626
E. 76th St., 45th Ave. to 259 ft. North North line 45th Ave	1	"	270
E. Washington St., E. 74th St. to E. 76th St	1	"	346
E. Alder St., E. 71st St. to E. 73rd St	1	"	466
E. 60th St., 130 ft. North North line 60th Ave. to 22 ft. North South line 62nd Ave	1	"	508
50th Ave., 13 ft. East West line to 26 ft. East East line E. 80th St	3	"	63
37th Ave., 107 ft. East East line E. 69th St. to 108 ft. East East line E. 70th St	2½	"	264
E. 50th St., 9 ft. North North line to 1,201 ft. North North line E. Stark	2	"	1,192
E. 67th St., 62nd Ave. to 63rd Ave	2	"	354
E. Sherman St., E. 45th St. to E. 46th St	2	"	228
E. 45th St., E. Lincoln St. to E. Sherman St	2	"	456
E. Sherman St., E. 44th St. to E. 45th St	2	"	202
E 44th St., E. Lincoln to E. Sherman St	2	"	456
E. 72nd St., 11 ft. North South line to 89 ft. South South line 37th Av	2	"	100
E. 54th St., 22 ft. North South line to 130 ft. South South line 59th Ave.	2	"	152
Alley bet. 59th and 60th Aves., E. 54th St. to E. 62nd St	2	"	1,954
E. 57th St., 21 ft. North South line to 130 ft. North North line 60th Av.	2	"	189
64th Ave., 18 ft. West East line to 430 ft. East East line E. 52nd St	1½	"	448
Alley bet. E. 63rd and 64th St., North line to 28 ft. South North line 45th Ave	1½	"	28
Alley bet. E. 66th and 67th St., Powell St. to 40th Ave	1½	"	1,297
Alley bet. E. 63rd and 64th Sts., Powell St. to 40th Ave	1¼	"	1,295
Alley bet. E. 65th and 66th Sts., Powell St. to 40th Ave	1	"	1,297
Alley bet. E. 62nd and 63rd Sts., Powell St. to 40th Ave	1½	"	1,295
Alley bet. E. 64th and 65th St., Powell Sts. to 40th Ave	1¼	"	1,295
Alley bet. E. 62nd and 63rd Sts., 40th Ave. to Foster Road	1½	"	1,219
Alley bet. E. 63rd and 64th Sts., 40th Ave. to 45th Ave	1½	"	1,291
62nd St. S. E., 22 ft. North South line to 134 ft. North North line 62nd Ave. S. E	1½	"	172
Alley bet. 60th and 62nd Ave., E. 62nd St. to 100 ft. East East line 65th St	1½	"	773
E. Stark St., E. 69th St. to E. 70th St	1¼	"	220
E. 33rd St., 20 ft. North South line to 170 ft. North North line Francis Ave	1¼	"	210
Alley bet. E. 67th and 68th Sts., Powell St. to 40th Ave	1¼	"	1,282
Alley bet. E. 69th and 70th Sts., Powell St. to 40th Ave	1¼	"	1,308
Alley bet. E. 68th and 69th Sts., Powell St. to 40th Ave	1¼	"	1,278
E. 19th St., Sandy Blvd. to E. Irving St	1	"	350
Marie St., 3rd Ave. to 7th Ave	1	"	990
E. Washington St., E. 76th St. to E. 80th St	1	"	940
E. Stark St., West line Brooke St. to 240 ft. East	4	Steel	290
E. Stark St., 240 ft. East East line Brooke St. to 21 ft. West East line E. 69th St	2½	W. I.	830
Alley bet. 62nd and 63rd Ave., 13 ft. West East line E. 62nd St. to 79 ft. West West line E. 65th St	2	"	536
Total			48,592

SUMMARY

Size	C. I. Miles	Steel-W. I. Miles	Wood Miles	Total Miles
¾-inch	.....	0.061	.....	0.061
1 -inch	.....	2.171	.....	2.171
1¼-inch	.....	1.749	.....	1.749
1½-inch	.....	2.082	.....	2.082
2 -inch	.....	1.570	0.607	2.177
2½-inch	.....	0.219	.....	0.219
3 -inch	.....	0.012	0.039	0.051
4 -inch	0.018	0.055	0.036	0.109
6 -inch	.....	.....	0.584	0.584
	0.018	7.919	1.266	9.203

PIPE ABANDONED OR REMOVED DURING THE FISCAL YEAR ENDING NOVEMBER 30, 1915

ALBINA	Size	Kind	Length (feet)
Union Ave., Knott St. to Graham Ave	8	C. I.	361
Killingsworth Ave., E. 31st St. to Glenn Ave	2	W. I.	214
Union Ave., Lot 3, Blk. 6, Highland Add. to Alberta St	6	C. I.	673
Sumner St., F. 13th St. to 20 ft. West West line right of way	2	W. I.	100
Shaver St., Commercial St. to Albina Ave	2	"	862
Shaver St., Maryland Ave. to Missouri Ave	2	"	765
Killingsworth Ave., Glenn Ave. to E. 31st St	2	"	548
E. 20th St., 24 ft. North North line Prescott St. to 3 ft. South South line Prescott	2	"	87
E. 8th St., 2 ft. South South line Liberty St. to 18 ft. North South line Liberty	2	"	20
Liberty St., 42 ft. West East line E. 8th St. to 124 ft. East East line 8th	2	"	166
E. 33rd St., Ainsworth Ave. to 100 ft. North North line Killingsworth	1½	"	1,145
Baldwin St., Peninsular Ave. to 477 ft. East of Peninsular	1	"	495
E. 15th St., 53 ft. North North line Junior St. to 18 ft. North South line Dekum Ave	1	"	165
E. 15th St., 39 ft. South South line Junior St. to 89 ft. South South line Junior	1	"	50
Boston Ave., 25 ft. South North line Buffalo St. to 380 ft. North North Line same	1	"	405
Buffalo St., 16 ft. West East line Boston Ave. to 11 ft. East East line Boston	1	"	27
Alberta St., 19 ft. East West line Gay St. to 200 ft. West West line Gay	1	"	219
Wygant St., Denver Ave. to Gay St	1	"	632
Wygant St., 32 ft. West East line Gay St. to 308 ft. West West line Gay	1	"	336
Peninsular Ave., Houghton St. to Trenton St	1	"	574
Sumner St., E. 13th St. to right of way	1	"	220
Fremont St., Union Ave. to 21 ft. East East line Union Ave	2	"	93
Fremont St., E. 7th St. to E. 8th St	2	"	267
Omaha, Portland Blvd. to Holman St	2	"	648
Killingsworth Ave., E. 31st St. to E. 33rd St	2	"	822
Church St., Patton Ave. to 150 ft. West West line Concord St	1½	"	810
Church St., Union Ave. to 450 ft. East East line Union Ave	1½	"	450
E. 32nd St., Ainsworth Ave. to alley South of Ainsworth	1½	"	200
Holman St., Denver Ave. to Campbell St	1¼	"	238
Campbell St., Holman St. to Highland St	1	"	400
Omaha, Holman St. to Killingsworth Ave	1	"	1,896
Dwight St., Lombard St. to Kilpatrick St	4	Steel	1,150
Union Ave., Skidmore St. to Lot 3, Blk. 6, Maegley Highland	6	W. I.	1,003
Union Ave., Skidmore St. to Graham Ave	6	"	4,290
Ainsworth Ave., E. 30th to E. 33rd St	4	"	1,027
Fremont St., E. 57th St. to E. 59th St	16	C. I.	458
Total	.....	.....	21,816

SUMMARY

Size	C. I. Miles	Steel-W. I. Miles	Wood Miles	Total Miles
1 -inch	.....	1.026	.....	1.026
1¼-inch	.....	0.045	.....	0.045
1½-inch	.....	0.493	.....	0.493
2 -inch	.....	0.870	.....	0.870
4 -inch	.....	0.412	.....	0.412
6 -inch	0.127	1.002	.....	1.129
8 -inch	0.068	.....	.....	0.068
16 -inch	0.087	.....	.....	0.087
	0.282	3.848	.....	4.130

RECAPITULATION

Pipe Removed or Abandoned During the Fiscal Year Ending November 30, 1915

Size	West Side Miles	East Side Miles	Albina Miles	Total Miles
¾-inch	.....	0.061	.....	0.061
1 -inch	.....	2.171	1.026	3.197
1¼-inch	0.065	1.749	0.045	1.859
1½-inch	.....	2.082	0.493	2.575
2 -inch	.....	2.177	0.870	3.047
2½-inch	.....	0.219	.....	0.219
3 -inch	.....	0.051	.....	0.051
4 -inch	0.221	0.109	0.412	0.742
6 -inch	0.375	0.584	1.129	2.088
8 -inch	0.044	.....	0.068	0.112
16 -inch	.....	.....	0.087	0.087
	0.705	9.203	4.130	14.038

RECAPITULATION—DISTRIBUTION SYSTEM—FISCAL YEAR ENDING NOVEMBER 30, 1915

Mains 4 inches in Diameter and Over Laid, and Mains Taken Out or Abandoned, Showing Net Increase

WEST SIDE	4 in.	5-in.	6-in.	7-in.	8-in.	10-in.
Laid or acquired	1.241	.....	4.205	.....	1.090	.....
Removed or abandoned	0.221	.....	0.375	.....	0.044	.....
Net increase	1.020	.....	3.830	.....	1.046	.....
EAST SIDE						
Laid or acquired	.....	.....	1.080	.....	3.758	.....
Removed or abandoned	0.109	.....	0.584	.....	.....	.....
Net increase	(-0.109)	.....	0.496	.....	3.758	.....
ALBINA						
Laid or acquired	.....	.....	1.600	.....	2.704	0.015
Removed or abandoned	0.412	.....	1.129	.....	0.068	.....
Net increase	(-0.412)	.....	0.471	.....	2.636	0.015

RECAPITULATION—DISTRIBUTION SYSTEM—FISCAL YEAR ENDING NOVEMBER 30, 1915

WEST SIDE	12-in.	16-in.	20-in.	24-in.	30-in.	Total Miles
Laid or acquired	4.992					11.528
Removed or abandoned						0.640
Net increase	4.992					10.888
EAST SIDE						
Laid or acquired		1.173				6.011
Removed or abandoned						0.693
Net increase		1.173				5.318
ALBINA						
Laid or acquired	1.725		0.035	0.842	2.733	9.654
Removed or abandoned		0 087				1.696
Net increase	1.725	(-0.087)	0.035	0.842	2.733	7.958

Total miles of pipe laid or acquired, 4 in. diameter and over ..... 27.193 miles
Total miles of pipe 4 in. diameter and over, removed or abandoned ..... 3.029 "

Net increase, 4 in. diameter and over ..... 24.164 miles

RECAPITULATION—DISTRIBUTION SYSTEM—FISCAL YEAR ENDING NOVEMBER 30, 1915

WEST SIDE	½-in.	¾-in.	1-in.	1¼-in.	1½-in.
Laid or acquired		0.264	0.385	0.139	0.201
Removed or abandoned				0.065	
Net increase		0.264	0.385	0.074	0.201
EAST SIDE					
Laid or acquired					0.135
Removed or abandoned		0.061	2.171	1.749	2.082
Net increase		−0.061	−2.171	−1.749	−1.947
ALBINA					
Laid or acquired		0.068	0.095		
Removed or abandoned			1.026	0.045	0.493
Net increase		0.068	−0.931	−0.045	−0.493

RECAPITULATION—DISTRIBUTION SYSTEM—FISCAL YEAR ENDING NOVEMBER 30, 1915

WEST SIDE	2-in.	2½-in.	3-in.	Total Miles
Laid or acquired	3.582	0.068	0.514	5.153
Removed or abandoned	.....	.....	.....	0.065
Net increase	3.582	0.068	0.514	5.088
EAST SIDE				
Laid or acquired	6.034	.....	.....	6.169
Removed or abandoned	2.177	0.219	0.051	8.510
Net increase	3.857	−0.219	−0.051	−2.341
ALBINA				
Laid or acquired	3.432	.....	.....	3.595
Removed or abandoned	0.870	.....	.....	2.434
Net increase	2.562	.....	.....	1.161

Total miles pipe laid or acquired under 4-in. diameter ..... 14.917 miles
Total miles pipe removed or abandoned under 4-in. diameter ..... 11.009 "

Net increase under 4-in. diameter ..... 3.908 "
(Not included in foregoing Summaries of pipe in use).

STATEMENT OF PIPE LAID BY PRIVATE CONTRACTS UNDER CITY SUPERVISION DURING THE FISCAL YEAR ENDING NOVEMBER 30, 1915, AND NOT YET TAKEN OVER BY THE CITY

(Not Included in Foregoing Summaries of Pipe in Use)

WESTOVER TERRACE	Size	Length (feet)	Feet	Est. Cost
Albemarle Ter., Melinda Ave. to Cumberland Road	6	860	.....	.....
Culpepper Ter., South line Lot 20, Blk. 8, to Cumberland Road	6	507	.....	.....
Cumberland Rd., Albemarle Ter. to Shenandoah Ter.	6	732	.....	.....
Shenandoah Ter., West line Lot 8, Blk. 12, to Cumberland Rd	6	505	.....	.....
Branch on Cumberland Rd. and Shenandoah Ter.	8	64	.....	.....
Total length 6-in. pipe	.....	.....	2,604	.....
Total length 8-in. pipe	.....	.....	64	$ 2,800.00
MORNINGSIDE ADD. (PART OF)				
E. Stark St., E. 70th St. to E. 71st St	8	326	.....	.....
Branch on Royal Ave.	6	34	.....	.....
Ayer Afe., 769 ft. to 1,097 ft. North North line E. Stark	6	328	.....	.....
Matteson Ave., 920 ft. to 1,192 ft. North North line E. Stark St	6	272	.....	.....
Total length 6-in. pipe	.....	.....	634	.....
Total length 8-in. pipe	.....	.....	326	$ 1,042.0

SUMMARY

Size	Length (feet)	Length (miles)	Est. Cost
6-inch	3,238	0.613	.....
8-inch	390	0.074	.....
	3,628	0.687	$3842.00

BUREAU OF STREET CLEANING

As the appropriation for conducting the Bureau of Street Cleaning for the coming year has been reduced to the minimum, and as it is the desire to keep the streets of the city in as clean and presentable condition as in the past, it will be necessary to strictly enforce the law prohibiting the throwing of any kind of rubbish on an improved street, and compelling contractors and others to remove the debris and material from the street immediately upon completion of their contracts. A street may be surfaced with the most modern pavement, and be followed up with the best system of hand sweeping, yet if the public persist in throwing paper, fruit parings, store sweepings, etc., into the street, the surface cannot be kept in a clean condition. We have an ordinance prohibiting these things being done, but it rests with the Police Bureau to enforce it.

We desire to have the co-operation of the various organizations throughout the city, which are formed for the betterment of the districts in which they are located. With their assistance we would be enabled to give better service and probably further reduce the cost of the Bureau.

The following statement will show the frequency with which the several districts throughout the city are cleaned:

WEST SIDE NIGHT CREW

Cleaned every night

All streets east of Fourteenth, from Yamhill to Burnside.

All streets east of Ninth, from Burnside north, except Front street, from Glisan north, and Seventh street from Johnson north.

All streets east of Fifth, from Yamhill to Jefferson.

All streets east of Fourth, from Jefferson to Mill.

Also the main thoroughfares running out from the business center as follows: Alder to Lownsdale, Washington to Twentieth, Burnside to Sixteenth, Everett to Twelfth, Flanders to Twelfth, Front to Hall, First to Arthur and Second to Montgomery.

This area contains 454 blocks.

WEST SIDE DAY CREW

Cleaned three times each week.

District lying between Ninth and Fourteenth, and Burnside and Hoyt.

This area contains 40 blocks.

Cleaned twice each week

All streets west of Fifth, from Yamhill south, except Kings and Portland Heights.

All streets west of Fourteenth, from Yamhill to Overton, except those main thoroughfares cleaned every day and mentioned above.

This area contains 600 blocks.

Cleaned every four days

All streets north of Overton.

All streets south of Mill, except those main thoroughfares cleaned every day and mentioned above.

Fifth street, from Jefferson south; Seventh street, from Johnson north, and Front street, from Glisan north.

This area contains 375 blocks.

EAST SIDE NIGHT CREW

Cleaned every night

All hard-surfaced streets lying between Ellsworth and Holladay, from Grand to the river, including the Willamette River bridges.

Also the following individual streets: Union to Alberta, Grand to Broadway; Russell, from Williams to Gantenbein; McMillan, from Williams to Crosby; Larrabee, from Holladay to McMillan; Burnside, from Grand to Tenth; Broadway, from Union to Eighth; Williams, from Broadway to Alberta; Fargo, from Williams to Vancouver; Knott, from Union to Vancouver; Milwaukee, from Holgate to Hawthorne; Division, from Tenth to Twenty-first; Twenty-first, from Division to Powell; Hawthorne, from Grand to Fourteenth, and Belmont, from Grand to Thirtieth.

This area contains 296 blocks.

Cleaned three times each week

Crosby, from Holladay to McMillan; Third, Holladay to Weidler; Larrabee, from McMillan to Hancock; Williams, from Holladay to Broadway; Multnomah, from First to Grand; Wasco, from Union to Grand; Hassalo, from Larrabee to Grand; Burnside, from Tenth to Twenty-fourth; Broadway, from Eighth to Twentieth; Holladay, from Grand to Thirteenth; Schuyler, from First to Ninth; Second, from Hancock to Broadway; Russell, from Gantenbein to Goldsmith; Commercial, from Knott to Russell; Milwaukee, from Bybee to Holgate; Twenty-first, from Division to Bush; Hawthorne, from Fourteenth to Thirtieth; Fourteenth, from Hawthorne to Belmont; Morrison, from Union to Twentieth; Union, from Salmon to Hawthorne; Eleventh, from Brooklyn to Frederick, and Thirteenth, from Hawthorne to Morrison.

This area contains 173 blocks.

Cleaned once each week

Sixteenth, from Holgate to Powell; Sixteenth, from Division to Brooklyn; Fifteenth, from Division to Ellsworth; Fourteenth, from Division to Clinton; Thirteenth, from Division to Clinton; and Ivon, from Twelfth to Sixteenth.

This area contains 31 blocks.

EAST SIDE DAY CREW

Owing to the large area to be cleaned by this crew, comprising approximately 200 miles, and the lack of equipment, it is impossible to have regular routes. The crew cleans about 26 miles per day.

There are 134 miles of macadam and gravel streets in the city which must be cleaned. With the present crew we clean an average of about one mile per day.

The following table comprises the employes for the operation of the Bureau of Street Cleaning:

1 superintendent, 1 clerk, 3 district superintendents, 2 foremen, 3 chauffeurs, 1 foreman (repair hsop), 3 repairmen, 2 broom-makers, 1 horseshoer, 10 hostlers, 207 laborers.

The West Side day district superintendent has 54 laborers and 1 truck chauffeur, who work as follows:

Nine men operate two horse-brooms, one sprinkling wagon and three carts, and clean an average of 104,000 square yards (5 miles) per day.

Eleven men operate five flushing machines and one cart and clean 208,000 square yards (10 miles) per day.

Nineteen men, each with a patrol cart and dressed in a white suit patrol the main business thoroughfares during the day, keeping them free from horse-droppings, paper and all unsightly rubbish which accumulates constantly during the day. These same streets are cleaned every night by the night crew, but patrolling them during the day aids materially in keeping them in a presentable condition. These men patrol an average of eight blocks each, four times per day.

Three men clean macadam and gravel streets by scraping up the mud and rubbish, which is then hauled away. These men also hand-sweep the hard-surfaced streets in those districts which are too hilly to take our apparatus. As these hard-surfaced streets are not traveled much, owing to the grades, they never become very dirty. These men clean an average of 6,240 square yards (3-10 miles) of macadam and gravel streets per day.

Three men, with one horse and cart, remove and haul away the dirt from catch-basins. These men clean an average of 50 catch-basins each day, removing about five yards of dirt.

One man levels and keeps the dumps in a safe condition for dumping.

Three men work as hostlers in the barn.

One chauffeur and two laborers, with a three-ton auto truck, haul away the rubbish collected by the patrol-cart men, and the dirt from the macadam and gravel streets.

In order to give the men their annual vacation it is necessary for the crew to have three men on vacation relief.

The West Side night district superintendent has forty-two laborers, who work as follows:

Thirty-one men operate six horse-power brooms, two sprinkling wagons and ten carts, and clean an average of 384,800 square yards (18½ miles) each night.

Six men operate three flushing machines and clean an average of 104,000 (5 miles) per night.

Three men with one horse and cart remove and haul away the dirt from catch-basins in the business district. These men clean an average of 55 catch-basins each night.

In order to give the men their annual vacations it is necessary for this crew to have two men on vacation relief.

The East Side district superintendent has 65 laborers and 2 truck chauffeurs, who work as follows:

Twelve men operate three horse-power brooms, one sprinkling wagon and four carts, and clean an average of 202,800 square yards (9¾ miles) per day.

The Elgin motor sweeper requires one chauffeur and two laborers, with the use of a man, with a horse and cart a portion of the day. This machine cleans an average of 72,000 square yards (3½ miles) per day.

Six men operate two squeegee machines and two carts and clean an average of 140,400 square yards (6¾ miles) per day. These machines can be used successfully only on perfectly smooth pavements, but do very effective work on that class of streets.

One man with a patrol cart, patrols the business section in the vicinity of Williams avenue and Russell street. He patrols 30 blocks twice each day.

Five men, employed sweeping crosswalks in the residence district, clean an average of 200 crosswalks per day.

Four men, with two horses and carts, remove and haul away the dirt from catch-basins. These men clean an average of 95 catch-basins per day, removing about 12 yards of dirt.

One man levels and keeps the dumps in a safe condition for dumping.

Three men work as hostlers in the barn.

Eleven men clean macadam and gravel streets, by scraping up the mud and rubbish, which is then hauled away. These men clean an average of 15,600 square yards (¾ mile) per day.

One chauffeur and five laborers, one of whom acts as a chauffeur, with two five-ton auto trucks, are employed carting away the dirt which has been scraped up on the macadam and Gravel streets by the hoemen.

In order to give the men their annual vacations, it is necessary for this crew to have three men on vacation relief.

The East Side night foreman (Hancock barn division) has twenty-one laborers who work as follows:

Sixteen men operate three horse-power brooms, one sprinkling wagon and five carts and clean an average of 176,800 square yards (8½ miles) per night.

Four men operate two flushing machines and clean 72,800 square yards (3½ miles) per night.

In order to give these men their annual vacations it is necessary to have one man for vacation relief.

The East Side night foreman (Brooklyn barn division) has twenty-five laborers, who work as follows:

Eighteen men operate three power brooms, one sprinkling wagon and seven carts, and clean an average of 197,600 square yards (9½ miles) per night.

Six men operate three flushing machines and clean an average of 97,760 square yards (4.7 miles) per night.

In order to give the men their annual vacation it is necessary for this crew to have one man for vacation relief.

The following is a statement of the average cost of cleaning by the various methods:

	Per 1000 sq. yds.	Per Mile
Average cost of horse-broom sweeping	$0.3105	$ 6.46
Average cost of motor-broom sweping	.1526	3.17
Average cost of flushing	.2293	4.77
Average cost of squeegee sweeping	.145	2.96
Average cost of hand patrol cart sweeping	.336	7.00
Average cost cleaning macadam and gravel	2.678	55.70
Average cost of cleaning crosswalks, each	.075	.....
Average cost of cleaning catchbasins, each	.17	.....

The Bureau oiled 123.2 miles of the city streets during the summer season at a cost of $7,180.84.

Following is a statement of the distances oiled in the various widths:

36 feet wide	1.5	miles or	9.	miles	6 feet wide
30 feet wide	1.7	miles or	6.8	miles	6 feet wide
24 feet wide	72.2	miles or	288.8	miles	6 feet wide
18 feet wide	20.3	miles or	60.9	miles	6 feet wide
12 feet wide	15.45	miles or	30.9	miles	6 feet wide
6 feet wide	12.05	miles or	12.05	miles	6 feet wide
	123.2		408.45		

Average cost per six-foot mile, $17.58.

Following is a statement of the appropriation and receipts, expenditures and unincumbered balances in the Bureau of Street Cleaning account for the year ending November 30, 1915:

	Total Appropriation Including Transfers, Credits, etc.	Total Incumbrance	Unincumbered Balance
Personal service	$228,398.00	$220,489.19	$ 7,908.81
Supplies	28,700.00	28,544.44	155.56
Material	15,300.00	11,116.83	4,183.17
Equipment	9,765.00	4,184.28	5,580.72
Construction and extension	7,211.96	4,115.59	3,096.37
Repairs	4,500.00	3,323.46	1,175.54
Transportation and communcation	617.00	589.50	27.50
Light, heat and power	125.00	13.27	111.73
Janitorial service	125.00	105.02	19.98
Contingencies	1,000.00	221.13	778.87
Fixed charges	600.00	600.00	.....
Totals	$296,341.96	$273,302.71	$ 23,039.25

Real property owned by this Bureau:

Lots 5, 8, 9, 10, 11 and 12, Block 1, Davenport Addition, with a three-story concrete and brick barn and repair shop and wagon shed.

Lots 1, 2, 7 and 8, Block 251, Holliday Addition, with a two-story frame barn.

Parcel of land 112 feet by 200 feet, at Milwaukee and Powell, with a two-story brick barn.

Statement of livestock owned by this bureau:

Horses on hand December 1, 1914, 158; horses received during the year, 6; total, 164. Horses sold during the year, 6; horses died during the year, 2; horses killed during the year, 2; horses given away (Pisgah Home), 1; total, 11. Horses on hand November 30, 1914, 153.

GARBAGE DISPOSAL.

Early in the year the matter of municipal collection was considered under existing authorization, viz.:

Requiring a charge for service, was considered impractical.

Later consideration has not developed sufficient or any reason for a change of opinion, that the expense of making small collections would be unreasonable as compared with the receipts or that payment cannot be equitably enforced, the only penalty possible to impose being the discontinuance of service. Also that collection on a fee basis would secure no more garbage than by the present method.

If we were not to have collection on a broad and effective principle, then it appeared unnecessary to construct an additional incinerator at an expense of approximately $200,000. This construction was therefore deferred, saving to the city about $48,000 annually.

The result has fully justified such deferment, the tonnage having not materially increased and the present plant has taken care of it, withstanding the load fairly well.

For the same reason it seems advisable to defer additional construction for at least another year and make a corresponding saving.

Repairs to the existing plant have been consistently made and it is in good condition.

The cost of incineration has been reduced 2.22 per cent.

The incinerator now has on hand between 35,000 and 40,000 bricks removed from the chimney and general construction of the old incinerator, the value of which, if cleaned, would be between five and six dollars per thousand. It also has on hand one car of curved blocks derived from the same source, and which will be used from time to time in the repair of the present plant.

Bonded obligation:		
Total amount of bonds issued		$108.000
Redemptions as follows:		
September, 1911	$ 5,000	
September, 1912	5,000	
December, 1912	5,800	
September, 1913	5,000	
December, 1913	5,800	
September, 1914	5,000	
December, 1914	5,800	
September, 1915	5,000	
December, 1915	5,800	
Total		48,200
Balance outstanding		$ 59,800

Total amount of garbage incinerated:		
Garbage	39,452¼	tons
Manure	680	tons
Trash	5,866¾	tons
Total	45,999	tons

Percentage of each class of refuse incinerated:		
Garbage	85¾	per cent
Manure	1½	per cent
Trash	12¾	per cent
Average amount of refuse incinerated per day	148	tons

Cost of incineration per ton:		
Labor	31 1/3	cents
Supplies and repairs	1 2/3	cents
Total	33	cents
Animals incinerated:		
Horses		14
Dogs		1121
Colts		2
Sheep		1
Calves		*2
Hogs		2
Bear		1
Total		1143
*1 elk calf.		
Animals hauled by city's team:		
Horses		3
Hogs		1
Total		4
Number of loads received from scavengers		33,599
Number of loads received from non-licensed teams		1,947
Total number of loads received		35,546
Average amount of refuse incinerated per day		148 tons
Percentage delivery by non-licensed teams		5½ per cent
Average number of loads received per day		114 loads
Average weight per load		2,591 pounds
Percentage delivery by licensed teams		94½ per cent
Operating expense of the Incinerator:		
Salaries		$14,411.25
Supplies and Repairs		718.59
Total		$15,129.84
Operating Expense of Dump and Ground:		
Salaries		$ 5,452.25
Supplies		58.40
Total		$ 5,510.65
Operating Expense of Barn:		
Salaries		$ 468.00
Supplies		212.03
Total		680.03
Complete Total of the Fiscal Year		$21,320.52
Statement of Approriations and Expenditures, November 30, 1815:		
Appropriation including transfers		$25,537.35
Total incumbrance		21,320.37
Unincumbered balance		4,216.98

Of the total cost of the incinerator, 95 per cent was for salaries, 2½ per cent for repairs to furnace, 1 per cent for repairing of furnace tools, and 1½ per cent for plant supplies.

Number of men employed, 19; number of men discharged, none; number of men resigned, 1; number of men appointed, 1; number of men injured on duty, none.

TOTAL AMOUNT INCINERATED

	Garbage Tons	Manure Tons	Trash Tons	Total Tons
December	2,679¼	21¼	382½	3,083
January	2,880½	73½	425¼	3,379¼
February	2,725	73¾	471¼	3,270
March	3,487½	94½	659½	4,241½
April	3,372½	74¼	621¼	4,068
May	3,160½	94½	493½	3,748½
June	3,331	85¾	508½	3,925¼
July	3,540½	72½	503½	4,116½
August	3,562½	62½	450¼	4,075¼
September	3,779½	14½	459	4,253
October	3,450½	8	452¼	3,910¾
November	3,483	5	440	3,928
	39,452¼	680	5,866¾	45,999

OPERATING EXPENSE OF INCINERATOR

	Salaries	Supplies & Repairs	Total
December	$1,140.75	$164 42	$ 1,305.17
January	1,209.00	65.76	1,274.76
February	1,151.00	15.45	1,166.45
March	1,238.00	38.19	1,276.19
April	1,198.50	69.72	1,268.22
May	1,191.00	25.79	1,216.79
June	1,209.00	29.22	1,238.22
July	1,238.00	16.13	1,254.13
August	1,209.00	23.12	1,232.12
September	1,209.00	90.12	1,299.12
October	1,209.00	74.26	1,283.26
November	1,209.00	106.41	1,315.41
Total	$ 14,411.26	$718.59	$ 15,129.84

UTILITY POLE CONSTRUCTION.

It is satisfying to note that unusual progress has been made in the past year in the work of eliminating useless poles which have been for a long time eyesores on the public streets.

This department took up the pole problem in 1913, the first active work being done on Front street, where several companies maintained thick lines of these unsightly timbers. The Commissioner of Public Utilities arranged a meeting with the heads of the different companies involved and was able to show them that by cutting out needless construction traffic could be greatly facilitated and the general public benefited without loss of efficiency to the companies themselves.

Front street now presents a far different aspect to that of former years, where at one time the sides of the street resembled picket fences, and great improvement is noticeable and the pole construction has been reduced 30 per cent.

With this as a beginning, the four leading utility companies of the city, viz.: The Portland, Railway, Light & Power Company, Northwestern Electric Company, Pacific Telephone & Telegraph Company and the Home Telephone Company formed what is known as the joint pole committee, which now has charge of all new construction involving the installation of poles. The committee has a secretary and an office in the Electric Building and in its last report to this department, dated December 6, 1915, states that arrangements had been made at that time for the joint use and ownership of 3,071 poles. Two thousand, eight hundred and nineteen of these poles are used by two companies, 231 are used by three companies and 21 by four companies.

No new poles or pole lines are now erected until the possibility of joint ownership of existing poles or of erection of poles to serve the purposes of more than one party has been considered, and since this policy has stopped the erection of duplicate lines of new poles it is expected that in time the entire number of poles on the streets will be reduced to the number indispensable for the various services. Not only is this gratifying from the utilitarion viewpoint, but it is especially pleasing to those people who are actively engaged in furthering the city beautiful movement.

MOTOR BUS INSPECTION.

Under the authority and by direction of Ordinances numbered 30,315 and 30,578 as amended, a motor bus inspector was appointed January 23rd, 1915, and served the city to and including September 30th, 1915. At various times during this period the legality of the ordinances was questioned and the exact authority and power of the City not established. About September 30th it appeared that a definite conclusion as to the legality of the ordinance would not be arrived at in the near future. The services of the inspector were therefore dispensed with.

During his employment 468 chauffeurs were examined as to their qualifications for driving a public service motor bus conveyance. Of this number 19 were refused permits to drive on account of incompetence evidenced in various ways. Four hundred and twenty-two cars were examined and permission to operate refused to six.

Many chauffeurs as well as cars required two or more examinations. The number of chauffeurs and cars, therefore, does not represent the total of examinations.

As indicated heretofore, the authority of the city was in question during this period and a strict enforcement was not possible, but the efforts of the city, together with the willing co-operation of a large majority of car owners and drivers made it possible to render very material service to the traveling public by providing safe conveyances and drivers as well as a somewhat regular routing and time of operation of cars. The general result, even under adverse conditions, clearly evidenced the desirability of regulation of such service. At this time the litigation is not yet concluded, but it is expected that the authority of the city will be determined in the near future.

MOTOR BUS INSPECTION

Appropriation	$ 850.00
Expenditures (Personal Service)	326.67
Balance on hand	$ 523.33
Stationery and Supplies Appropriation	$ 100.00
Stationery and Supplies Expenditures	34.58
Stationery and Supplies Balance	$ 65.42

ANNUAL REPORT

OF

THE DEPARTMENT OF FINANCE

FOR THE FISCAL YEAR ENDING
NOVEMBER 30, 1915

DEPARTMENT OF FINANCE

C. A. BIGELOW
COMMISSIONER

BUREAU OF PURCHASES—
J. R. WOOD, Purchasing Agent

OFFICE OF CITY TREASURER—
WM. ADAMS, City Treasurer

BUREAU OF PUBLIC MARKETS—
J. A. EASTMAN, Market Master

BUREAU OF LICENSES—
J. S. HUTCHINSON, Inspector of Licenses

ANNUAL REPORT OF BUREAU OF PURCHASES.

During the past year the Bureau of Purchases has maintained its reputation among the business houses of the city in close buying and fair dealing with all concerned. Bids on all commodities purchased have been opened and tabulated in a systematic manner on specifications prepared by the bureaus interested. Centralization of purchasing all supplies and its co-ordinate functions as bill control, etc., has enabled this bureau to save money for the taxpayers, and has made it easier and cheaper for the business houses interested to deal with the city.

In the purchase of supplies and material, many instances of savings made can be shown. After a great deal of effort the printed forms used by the city and the quantities required on each by the different bureaus were compiled and put up for bidding. Keen competition was obtained among twenty-six bidders. The contract was let to the lowest bidder for one year at prices as low or lower than similar forms had ever been printed before, considering the higher cost of material. Since the contract was signed paper prices have been soaring, but the city of course has been protected. In fact, the city is protected for some time by contracts on almost all commodities of which the city is a large user. We were particularly fortunate in our contract for 50.000 gallons of gasoline. During the fall of this year, after considerable jockeying and rejection of bids, a price of 9½ cents per gallon was obtained, which was 2 cents below the then market price of gasoline. If the market continues to soar as indications at present would indicate, our saving for the coming year will be around $5,000.

In asking for bids for printing the Electrical Code a combination among the printers was plainly evident, when after the first bids had been rejected and the second opening showed practically the same bidders and the same prices. This bureau advertised the third time for bids, but let it be known that this bureau would send the printing out of town if a reasonable price was not secured. An out of town printing house did actually bid and came within $5 of getting the business. The low man was $78 under the first two openings when the combination was evident. At the third opening the bidders numbered five, as against two each the other two times.

In the purchase of ten fire alarm boxes a saving of $50 each was obtained, due to keen competition between the two companies.

In the matter of the purchase of hay and grain used by the city a saving of $2,938 was made over prices paid the year before. A part of this saving ($1,900) was obtained by rejecting the first bids, which seemed high, and re-advertiisng. Better bids to the extent of $1,900 were received at the second opening.

We were able to make an especially fine contract for sand, gravel, crushed rock, etc. The saving over the year 1914 was $1,175 and the saving over prices paid under the councilmanic form of government was approximately $2,500.

In the matter of the purchase of wheels for steam rollers: If we had purchased from the manufacturer as was generally done under the former administration in similar cases, we would have paid $500 for the two wheels. As it happened we secured prices from two local foundries and had them made for $389, a saving of $111.

A list of forty different kinds of commodities was compiled together with unit prices paid in 1912 and in 1915. A saving of 26 per cent was shown as an average throughout the list. A part of this showing was due to the difference in price paid for articles purchased at retail in small quantities and buying at wholesale in yearly requirements or contract, and part from market conditions.

Many other instances could be cited where savings have been made. In fact, the very existence of a Purchasing Agent in the City Hall means to the vendor that competition will always be keen and now, price and quality will always get the business.

J. R. WOOD,
Purhasing Agent.

CITY TREASURER'S REPORT FOR YEAR 1915.

Annual Report of Wm. Adams, City Treasurer, for the year ending November 30, 1915

Balance in Treasury Nov. 30, 1914	$1,504,050.48	$.....
Balance in New York Nov. 30, 1914	12,735.00	.....
Received from all sources	8,367,511.39	.....
Disbursed	.....	8,507,864.66
Balance in Treasury Nov. 30, 1915	.....	1,367,752.43
Balance in New York Nov. 30, 1915	.....	8,679.78
	$9,884,296.87	$9,884,296.87

GENERAL FUND

Balance per report Nov. 30, 1914 (Credited as follows):	$.....	$ 844,060.04
Receipts—		
General licenses	.....	64,009.91
Building permits	.....	12,784.95
Dog licenses	.....	15,050.00
Milk and cream licenses	.....	1,792.50
Vehicle licenses	.....	24,991.70
Fines Municipal court	.....	28,158.20
Public Market	.....	5,893.55
Miscellaneous costs	.....	864.58
Pound fees	.....	1,451.35
Prints	.....	367.89
Sidewalk permits	.....	950.50
Certified copies	.....	143.40
Liquor licenses	.....	291,213.50
Repair of sidewalks	.....	12,740.16
City charters	.....	18.80
Removing earth	.....	785.41
Interest on street extensions	.....	34.71
Solicitor's badges	.....	173.35
Rental, Hawthorne Avenue bridge	.....	19,416.09
Rental, Morrison bridge	.....	13,264.95
Rental, Burnside bridge	.....	5,550.99
Rental, Steel bridge	.....	2,426.13
Rental, Broadway bridge	.....	12,067.41
Franchise, Southern Pacific Co.	.....	2,525.00
Franchise, Oregon Electric Ry. C.	.....	1,285.00
Franchise, United Railway Co.	.....	2,200.00
Franchise, Portland Ry. L. & P. Co.	.....	11,972.00
Franchise, Spokane, Port. & Seattle Ry. Co.	.....	500.00
Franchise, Northwestern Electric Co.	.....	7,338.40
Franchise, O.-W. R. & N. Co.	.....	200.00
Franchise, Central Heating Co.	.....	50.00
Franchise, Portland Central Heating Co.	.....	5.00
Franchise, Home Telephone & Telegraph Co.	.....	3,378.93
Franchise, Pacific Tel. & Tel. Co.	.....	1,000.00
Franchise, Mt. Hood Ry. C.	.....	2,000.00
Taxes sundry years, J. M. Lewis, Co. Treas.	.....	99.52
Merchants Nat. Bank, int. Cert. of Deposit	.....	3,000.00
Damage to cart, Boyce Auto Co.	.....	4.75
Refund, Portland Gas & Coke Co.	.....	9.70
Refund, Car tickets, J. H. Knowles	.....	4.00
Comfort station	.....	248.99
Birth and death certificates	.....	154.65
Play grounds	.....	2.50
Storage of launch "Doc Yak"	.....	2.50
Multnomah Co. resurfacing roadway	.....	150.00
Multnomah Co. for steel	.....	31.50
Port. Ry. L. & P. Co., use of streets	.....	60.00
Junk sold	.....	340.85
Dividend, Percy & Strickler	.....	.38
Repairs, Union Avenue bridge	.....	677.85
Refund, Steel bridge, O.-W. R. & N. Co.	.....	119.35
Refund, insurance premium	.....	912.34

GENERAL FUND—Continued

O.-W. R. & N. Co., use of streets	$.....	$ 51.00
Canary birds sold	.....	2.50
Jitney bus receipts	.....	7.75
Survey work	.....	19.80
Auction of three skiffs	.....	6.00
Compression tests	.....	82.75
Fines, Circuit Court	.....	716.70
Rebate Ford auto	.....	60.54
Rolling	.....	891.62
Flushing	.....	15.68
Repairs, stone pavement	.....	423.93
Sale of old iron	.....	143.16
A. A. Beckstrom, concession Sellwood Park	.....	250.00
Com'n on telephones, City Hall	.....	10.71
Refund W. P. LaRoche, Barton vs. City	.....	.13
Interest on warrants	.....	1,235.79
Premium on bonds	.....	47,000.42
License tags	.....	7.25
Warrants held by City	.....	7.85
Sale of metal life boat	.....	17.00
Repairs, private sewer	.....	12.17
Tractor repairs	.....	57.73
Damage to flusher	.....	5.34
Market sheds	.....	3,891.00
Right of way	.....	3,015.22
Photographic service	.....	8.30
Damage to truck	.....	10.32
Damage to sprinkler	.....	65.00
Witness fees, R. C. Flanders	.....	1.60
Witness fees, L. E. Burdick	.....	12.40
Witness fees, Wm. Adams	.....	2.10
Witness fees, H. R. Albee	.....	4.20
Witness fees, W. H. Daly	.....	2.10
Witness fees, W. L. Brewster	.....	2.10
Witness fees, C. A. Bigelow	.....	2.10
Witness fees, C. H. Smith	.....	2.00
Witness fees, S. Grutze	.....	2.10
Witness fees, Mrs. E. L. Caldwell	.....	1.60
Witness fees, A. L. Barbur	.....	2.10
Contractor penalties	.....	455.00
Refund of postage	.....	.60
W. J. Donovan, jury fees	.....	74.60
Damage to sweeping cart	.....	9.35
Repairs of railing, Hawthorne Ave. bridge	.....	26.31
Taxes, John M. Lewis, Co. Treas	.....	1,619,923.03
Costs engineering, A. L. Barbur, Auditor	.....	63,611.36
Interest on daily balances	.....	12,795.07
Driveway permits	.....	81.50
Registration electrical contractors	.....	1,900.00
Grading permits	.....	140.00
Plumbing permits	.....	2.00
Taxes, St. Johns	.....	11,485.37
Taxes, Linnton	.....	10,715.42
Canoe sold, J. R. Wood, Purch. agent	.....	19.50
Railing sold, J. R. Wood, Purch. agent	.....	182.00
Police horses sold, J. R. Wood, Purch. agent	.....	342.50
Horses, wagon and harness sold, J. R. Wood	.....	550.00
Repairing roadway	.....	201.08
Replacing sign	.....	.20
Removing nuisance, weeds, etc	.....	1,090.73
Refund, Warren Construction Co	.....	93.67
Refund, tax, Com'n of Public Docks	.....	72.32
Stationery, Com'n of Public Docks	.....	629.96
Sale of rock	.....	163.82
Refund, Standard Oil Co	.....	24.00
Grappling	.....	68.50
Appeals, building inspector	.....	60.00
Jefferson Street levee	.....	3,849.96
Sale of sacks	.....	2,055.98

GENERAL FUND—Continued

Transfer liquor license	$.....	$ 140.00
Dominico Frisis lease	.....	10.00
Use of patrol boat	.....	5.00
Sale of anti toxin	.....	120.25
Damage to police auto, S. P. Co.	.....	661.75
Refund, expressage on plants	.....	10.03
Refund, Goodyear Rubber Co.	.....	2.52
Refund, Telegram	.....	2.21
Refund, Ambrose appeal	.....	5.00
Refund, Dr. Marcellus expense money	.....	12.05
Multnomah Co. account Liberty Bell	.....	125.00
Sale of Guinea pigs	.....	23.50
Damage to hose	.....	4.44
Wallace McCamant, account Liberty Bell	.....	144.25
Refund, Claim No. 29906	.....	.10
Refund, Material	.....	1.80
Bill board permits	.....	79.50
Sale of wood by city	.....	13,720.70
Sale of wood by Employment committee	.....	20.75
Vending machine	.....	2.46
Park concession, Mrs. Burnett	.....	1,300.00
Park concession, Mr. Bailey	.....	275.00
Lease of Blk 132, Gerlinger Motor Car Co.	.....	25.00
Sale of Asphalt machine	.....	10.50
Outstanding checks cancelled	.....	11.92
Park concession, Mr. Ross	.....	20.00
Wood sold, city of St. Johns	.....	1,312.95
Refund, Employment commission	.....	1,108.05
General fund, Linnton	.....	1,239.87
General fund, St. Johns	.....	3,075.28
Franchise, Dennison, St. Johns	.....	1.00
Rounding corners	.....	10.00
Oiling Country Club track	.....	20.00
Sale of curb irons	.....	1.00
Prize money, Panama-Pacific Exposition	.....	100.00
Donation, ship Success, Capt. Speier	.....	20.00
Map	.....	.45
Spraying trees	.....	3.00
Fence at gravel pit	.....	22.95
Connecting house laterals	.....	12.90
Towage and storage of launch	.....	2.50
Refund, Paul Keyser	.....	.83
Cedar log sold	.....	13.25
Refund, Ford Motor Car Co.	.....	350.00
Use of car, C. E. Atlas	.....	4.32
Electric Codes	.....	22.52
Drawings	.....	2.20
Refund, J. R. Wood, Ord. No. 11962	.....	4.87
Redemption of property	.....	3.11
Repairs to dock	.....	100.00
Safety First signs	.....	10.60
Recording permits	.....	12.30
Cleaning sewers	.....	16.23
Repair of sidewalk, Atwood	.....	6.52
Laurelhurst Park, repairs to trees	.....	51.00
Miscellaneous collections, chief of police	.....	115.81
Removing dead animals	.....	19.00
Hospital service	.....	3.00
Refund, Firestone Rubber Co.	.....	5.60
Refund, Portland Gas Co.	.....	11.15
School District No. 1, signs	.....	117.29
Refund salary, C. P. Leehan	.....	44.52
Damage to sweeper	.....	19.50
Northwestern Nat. Bank, int. Cert. of Dep.	.....	1,500.00
Autos sold	.....	670.00
Dividend Chicago market	.....	.30
Library Association, storage on car	.....	19.47
Kennel license	.....	5.00
Premium on Linnton improvement bonds	.....	436.65
Interest on Linnton improvement bonds	.....	44.06

GENERAL FUND—Continued

Interest on street extension bonds	$.....	$ 161.81
Transferred from 1915 tax fund	.....	2,048.70
Transferred from Fire department fund	.....	107.90
Transferred from police department fund	.....	44.27
Transferred from street repair fund	.....	209.44
Transferred from park fund	.....	78.42
Transferred from St. Clean'g & Sprink. fund	.....	26.15
Transferred from public auditorium fund	.....	15.08
Transferred from water fund	.....	6,561.37
Transferred from maintenance fund Linnton	.....	5.93
Transferred from special bridge fund	.....	409.44
Transferred from sewer fund	.....	27.70
Transferred from 1st ext. water fd. Linnton	.....	797.53
Transferred from Broadway bridge	.....	23.96
Transferred to—		
Street improvement fund	1,305.03	.....
Sewer fund	1,966.40	.....
Street and sewer interest fund	6,500.00	.....
Water fund	2,566.30	.....
Redemption fund	70.17	.....
Improvement bond sinking fund	6,465.62	.....
Improvement bond interest fund	82,607.93	.....
Special bridge fund	26.77	.....
Broadway bridge fund	1,182.00	.....
Park and Boulevard fund	356.25	.....
Runners and solicitors badges redeemed	52.50	.....
Crematory bonds redeemed and returned	10,800.00	.....
Crematory bonds interest coupons returned	3,675.00	.....
Warrants paid and returned	2,550,140.41	.....
Balance	555,233.27	.....
	$3,222,947.65	$3,222,947.65

FIRE DEPARTMENT FUND

Balance per report Nov. 30, 1914	$.....	$ 107.90
Transferred to General fund	107.90	.....
	$ 107.90	$ 107.90

POLICE DEPARTMENT FUND

Balance per report Nov. 30, 1914	$.....	$ 44.27
Transferred to General fund	44.27	.....
	$ 44.27	$ 44.27

STREET REPAIR FUND

Balance per report Nov. 30, 1914	$.....	$ 209.44
Transferred to General fund	209.44	.....
	$ 209.44	$ 209.44

BONDED INDEBTEDNESS INTEREST FUND

Balance per report Nov. 30, 1914	$.....	$ 105,448.83
Received taxes John M. Lewis, Co. Treas	.....	316,272.12
Received transfer from 1915 tax fund	.....	401.20
Received refund error in warrant	.....	.90
Interest coupons paid and returned	280,220.00	.....
Transferred to Chemical National Bank	33,400.00	.....
Transferred to Harris-Forbes & Co	3,000.00	.....
Transferred to Hanover National Bank	180.00	.....
Warrants paid and returned	129.40	.....
Balance	105,193.65	.....
	$ 422,123.05	$ 422,123.05

BONDED INDEBTEDNESS INTEREST FUND NEW YORK ACCOUNT

Balance Chase National Bank Nov. 30, 1914	$.....	$ 150.00
Balance Harris-Forbes & Co	.....	7,530.00
Balance Chemical National Bank	.....	5,055.00
Transferred to Chase National Bank	.....	3,000.00
Transferred to Harris-Forbes & Co	.....	15,000.00
Transferred to Chemical National Bank	.....	33,400.00
Transferred to Hanover National Bank	.....	180.00
Interest coupons pand Chase National Bank	3,060.00	.....
Interest coupons paid Harris-Forbes & Co	21,960.00	.....
Interest coupons paid Chemical National Bank	33,980.00	.....
Balance Chase National Bank	90.00	.....
Balance Harris-Forbes & Co	570.00	.....
Balance Chemical National Bank	4,475.00	.....
Balance Hanover National Bank	180.00	.....
	$ 64,315.00	$ 64,315.00

LIBRARY FUND

Balance per report Nov. 30, 1914	$.....	$ 40.59
Received taxes John M. Lewis, Co. Treas	.....	9.54
Warrants paid and returned	40.59	.....
Balance	9.54	.....
	$ 50.13	$ 50.13

PARK FUND

Balance per report Nov. 30, 1914	$.....	$ 78.42
Transferred to General fund	78.42	.....
	$ 78.42	$ 78.42

STREET CLEANING AND SPRINKLING FUND

Balance per report Nov. 30, 1914	$.....	$ 26.15
Transferred to General fund	26.15	.....
	$ 26.15	$ 26.15

PARK AND BOULEVARD FUND

Balance per report Nov. 30, 1914	$.....	$ 9,134.67
Received refund	.....	.22
Transferred from General fund	.....	356.25
Warrants paid and returned	7,144.39	.....
Balance	2,346.75	.....
	$ 9,491.14	$ 9,491.14

WATER FUND

Balance per report Nov. 30, 1914	$.....	$ 58,240.06
Receipts—		
Collections, use of water	.....	708,340.30
Sale of bonds $135,000 at 95 cents	.....	128,250.00
Sale of bonds $460,000 at .9403261	.....	432,550.00
Accrued interest on bonds 23 days at 4%	.....	1,175.56
Interest on daily balances	.....	6,050.19
Refund Eccles and Smith	.....	3.20
Repair of water main	.....	917.07
Repair of water meters	.....	92.60
Moving hydrant	.....	127.80
City Atty LaRoche, acc't Schaw-Balcher Co.	.....	503.65
Refund warrant	.....	1.00
For work at Oregon City	.....	42.65
For resetting fountain	.....	18.65
For motor car repairs	.....	5.00
For inspecting main	.....	64.00
Town of Linnton	.....	220.00
Rent	.....	125.00
Old iron	.....	5,641.68
Transferred from—		
General fund	.....	2,566.30
First extension water main, Linnton	.....	5,251.75
Linnton water fund	.....	41.14
Transferred to—		
Improvement Bond Sinking Fund	181,861.21	.....
General fund	6,561.37	.....
Chase National Bank	3,000.00	.....
Harris-Forbes & Co.	12,000.00	.....
National Park Bank (Linnton)	4,345.00	.....
Interest coupons paid and returned	291,032.50	.....
Warrants paid and returned	715,251.84	.....
Balance	136,175.68	.....
	$1,350,227.60	$1,350,227.60

BILL DISTRIBUTOR'S BADGE FUND

Balance per report Nov. 30, 1914	$.....	$ 218.00
Received for badges	.....	76.00
Badges redeemed and returned	53.00	.....
Balance	241.00	.....
	$ 294.00	$ 294.00

IMPROVEMENT BOND SINKING FUND

Balance per report Nov. 30, 1914	$.....	$ 203,608.49
Received sundry collections	.....	1,367,690.35
Received sale of bonds held by city	.....	652,542.81
Received transfer from Water fund	.....	181,861.21
Received transfer from General fund	.....	6,465.62
Bonds redeemed and returned	2,210,519.55	.....
Transferred to redemption fund	166.67	.....
Warrants paid and returned	1,058.13	.....
Charged off Ordinance No. 31096	42.07	.....
Balance	200,382.06	.....
	$2,412,168.48	$2,412,168.48

IMPROVEMENT BOND INTEREST FUND

Balance per report Nov. 30, 1914	$.....	$ 39,711.47
Received sundry collections	.....	646,542.92
Received interest on daily balances	.....	5,670.25
Received interest on bonds held by city	.....	20,306.05
Transferred to St. Johns imp't bond int. acc't	.....	317.27
Received transfer from General fund	.....	82,607.93
Received transfer from Rice interest fund	.....	150.00
Transferred to National Park Bank	6,428.41	.....
Warrants paid and returned	369.61	.....
Charged off Ordinance No. 31096	17.67	.....
Interest coupons paid and returned	778,736.62	.....
Balance	9,753.58	.....
	$ 795,305.89	$ 795,305.89

MT. HOOD RAILWAY & POWER CO. ORDINANCE NO. 22989

Balance per report Nov. 30, 1914	$.....	$ 3,000.00
Warrants paid and returned	2,000.00	.....
Balance	1,000.00	.....
	$ 3,000.00	$ 3,000.00

MT. HOOD RAILWAY & POWER CO. PERMANENT REPAIR FUND

Balance per report Nov. 30, 1914	$.....	$ 1,000.00
Balance	1,000.00	.....
	$ 1,000.00	$ 1,000.00

FIRE BOAT AND FIRE MAIN FUND

Balance per report Nov. 30, 1914	$.....	$ 108.03
Balance	108.03	.....
	$ 108.03	$ 108.03

BROADWAY BRIDGE FUND

Balance per report Nov. 30, 1914	$.....	$ 5,133.55
Transferred from General fund	.....	1,182.00
Transferred to Special Bridge fund	20.49	.....
Transferred to General fund	23.96	.....
Warrants paid and returned	195.91	.....
Balance	6,075.19	.....
	$ 6,315.55	$ 6,315.55

WATER BOND SINKING FUND

Balance per report Nov. 30, 1914	$.....	$ 136,410.87
Received collections	.....	143,880.00
Received Crematory bonds redeemed	.....	5,000.00
Received interest on bonds	.....	43,980.00
Warrants paid and returned	128,250.00	.....
Balance	210,020.87	.....
	$ 329,270.87	$ 329,270.87

WATER FUND BOND ACCOUNT

Balance per report Nov. 30, 1914	$.....	$ 22.95
Balance	22.95	.....
	$ 22.95	$ 22.95

BONDED INDEBTEDNESS SINKING FUND

Balance per report Nov. 30, 1914	$.....	$ 644.74
Received interest on bonds	.....	180.00
Balance	824.74	.....
	$ 824.74	$ 824.74

POLICE AND FIRE DEPARTMENT RELIEF FUND

Balance per report Nov. 30, 1914	$.....	$ 25.35
Balance	25.35	.....
	$ 25.35	$ 25.35

SPECIAL 1916 TAX FUND

Received taxes John M. Lewis, Co. Treas.	$.....	$ 2,292.25
Received interest on daily balances	.....	10.96
Balance	2,303.21	.....
	$ 2,303.21	$ 2,303.21

SPECIAL BRIDGE FUND

Balance per report Nov. 30, 1914	$.....	$ 3,669.93
Received taxes John M. Lewis, Co. Treas.	.....	26,057.16
Received transfer 1915 Tax fund	.....	33.85
Received refund warrant	.....	.01
Received transfer from General fund	.....	26.77
Received transfer from Broadway bridge fund	.....	20.49
Transferred to General fund	409.44	.....
Warrants paid and returned	7,475.07	.....
Balance	21,923.70	.....
	$ 29,808.21	$ 29,808.21

REDEMPTION FUND

Balance per report Nov. 30, 1914	$.....	$ 1,243.32
Received collections	.....	16,548.39
Received transfer from General fund	.....	70.17
Received transfer from Street Extension fund	.....	100.00
Received transfer from imp't bond sinking fund	.....	166.67
Received transfer from Sewer fund	.....	13.02
Warrants paid and returned	17,140.38	.....
Balance	1,001.19	.....
	$ 18,141.57	$ 18,141.57

PUBLIC AUDITORIUM FUND

Balance per report Nov. 30, 1914	$.....	$ 24,584.49
Received interest on daily balances	.....	403.66
Transferred to General fund	15.08	.....
Warrants paid and returned	10,300.00	.....
Balance	14,673.07	.....
	$ 24,988.15	$ 24,988.15

STREET EXTENSION BOND SINKING FUND

Balance per report Nov. 30, 1914	$.....	$ 390.54
Received assessments	.....	918.24
Balance	1,308.78	.....
	$ 1,308.78	$ 1,308.78

STREET EXTENSION BOND INTEREST FUND

Balance per report Nov. 30, 1914	$.....	$ 34.02
Received sundry collections	.....	311.59
Interest coupons paid and returned	321.53	.....
Balance	24.08	.....
	$ 345.61	$ 345.61

SINKING FUND

Balance per report Nov. 30, 1914	$.....	$ 11,094.39
Received taxes John M. Lewis, Co. Treas.	.....	121,344.84
Received transfer from 1915 Tax fund	.....	153.86
Received transfer from St. Johns City Hall fund	.....	150.07
Received crematory bonds redeemed and ret'd	.....	5,800.00
Received interest on Crematory bonds	.....	1,160.00
Received interest on Water bonds	.....	11,075.00
Received interest on Imp't and Street Extension bonds	.....	14,872.25
Received interest on daily balances	.....	560.54
Warrants paid and returned	136,512.09	.....
Balance	29,698.86	.....
	$ 166,210.95	$ 166,210.95

POLICE RELIEF FUND

Balance per report Nov. 30, 1914	$.....	$ 3,201.45
Received sundry collections	.....	1,805.00
Received bonds redeemed	.....	500.00
Received interest on bonds	.....	452.88
Received souvenir band	.....	500.00
Received donations	.....	50.00
Received interest on daily balances	.....	81.11
Warrants paid and returned	1,621.20	.....
Balance	4,969.24	.....
	$ 6,590.44	$ 6,590.44

STARK STREET EXTENSION FUND

Received collections	$.....	$ 500.00
Balance	500.00	.....
	$ 500.00	$ 500.00

STREET IMPROVEMENT FUND

Balance per report Nov. 30, 1914	$.....	$ 25,494.91
Received sundry collections	.....	1,058,384.35
Transferred from General fund	.....	1,305.03
Warrants paid and returned	1,056,763.99	.....
Balance	28,420.30	.....
	$1,085,184.29	$1,085,184.29

SEWER FUND

Balance per report Nov. 30, 1914	$.....	$ 12,370.96
Received sundry collections	.....	212,139.71
Transferred from General fund	.....	1,966.40
Transferred to Redemption fund	13.02	.....
Transferred to General fund	27.70	.....
Warrants paid and returned	214,233.67	.....
Balance	12,202.68	.....
	$ 226,477.07	$ 266,477.07

STREET EXTENSION FUND

Balance per report Nov. 30, 1914	$.....	$ 6,174.54
Received sundry collections	.....	12,576.38
Transferred to Redemption fund	100.00	.....
Warrants paid and returned	3,867.72	.....
Balance	14,783.20	.....
	$ 18,750.92	$ 18,750.92

STREET AND SEWER INTEREST FUND

Balance per report Nov. 30, 1914	$.....	$ 875.42
Interest on assessments	.....	5,806.56
Transferred from General fund	.....	6,500.00
St. Johns Street and Sewer Interest fund	.....	11.16
Interest paid on warrants	12,298.33	.....
Warrants paid and returned	5.77	.....
Balance	889.04	.....
	$ 13,193.14	$ 13,193.14

WATER MAIN FUND

Balance per report Nov. 30, 1914	$.....	$ 4,762.08
Received collections	.....	76.90
Balance	4,838.98	.....
	$ 4,838.98	$ 4,838.98

LINNTON WATER FUND

Received Town of Linnton	$.....	$ 25.24
Received collections	.....	15.90
Transferred to Water fund	41.14	.....
	$ 41.14	$ 41.14

IMPROVEMENT BOND INTEREST FUND, NEW YORK ACCOUNT NATIONAL PARK BANK

Transfer from Imp't Bond Interest fund	$.....	$ 7,168.16
Interest coupons paid and returned	4,800.88	.....
Balance	2,367.28	.....
	$ 7,168.16	$ 7,168.16

STREET AND SEWER INTEREST FUND—ST. JOHNS

Received from City of St. Johns	$.....	$ 11.16
Transfer to Street and Sewer Interest fund	11.16	.....
	$ 11.16	$ 11.16

NATIONAL PARK BANK, NEW YORK ACCOUNT LINNTON WATER BONDS

Transferred from Water fund	$.....	$ 4,345.00
Coupons paid and returned	3,547.50	.....
Balance	797.50	.....
	$ 4,345.00	$ 4,345.00

IMPROVEMENT BOND SINKING FUND—ST. JOHNS

Received from City of St. Johns	$.....	$ 8,706.89
Received collections	.....	1,281.71
Balance	9,988.60	.....
	$ 9,988.60	$ 9,988.60

IMPROVEMENT BOND INTEREST FUND—ST. JOHNS

Received from City of St. Johns	$.....	$ 1,057.02
Received premium on bonds	.....	896.66
Received interest on bonds	.....	90.49
Transferred to National Park Bank	739.75	.....
Transferred to Imp't Bond Interest fund	317.27	.....
Balance	987.15	.....
	$ 2,044.17	$ 2,044.17

CITY HALL FUND—ST. JOHNS

Received from City of St. Johns	$.....	$ 150.07
Transferred to Sinking fund	150.07	.....
	$ 150.07	$ 150.07

RICE INTEREST FUND—ST. JOHNS

Received from City of St. Johns	$.....	$ 150.00
Transferred to Improvement and Bond Int. fund	150.00	.....
	$ 150.00	$ 150.00

MAINTENANCE FUND—LINNTON

Received from Town of Linnton	$.....	$ 5.93
Transferred to General fund	5.93	.....
	$ 5.93	$ 5.93

FIRST EXTENSION WATER FUND—LINNTON

Received from Town of Linnton	$.....	$ 6,049.28
Transferred to General fund	797.53	.....
Transferred to Water fund	5,251.75	.....
	$ 6,049.28	$ 6,049.28

IMPROVEMENT BOND SINKING AND INTEREST FUND

Received collections	$.....	$ 21.12
Balance	21.12	.....
	$ 21.12	$ 21.12

IMPROVEMENT BOND SINKING FUND—LINNTON

Received assessments	$.....	$ 6.57
Balance	6.57	.....
	$ 6.57	$ 6.57

1915 TAX FUND

Balance	$.....	$ 2,880.61
Received interest on deposit	.....	4.34
Transferred to General fund	2,048.70	.....
Transferred to Bonded Indebtedness Int. fund	401.20	.....
Transferred to Sinking fund	153.86	.....
Transferred to Special bridge fund	33.85	.....
Warrants paid and returned	247.34	.....
	$ 2,884.95	$ 2,884.95

SUMMARY

Balance in treasury Nov. 30, 1915	$1,367,752.43	$.....
Balance in New York	8,679.78	.....
Credited as follows:		
General fund	.....	555,233.27
Bonded Indebtedness Interest fund	.....	105,193.65
Chase National Bank, New York	.....	90.00
Harris-Forbes & Co.	.....	570.00
Chemical National Bank	.....	4,475.00
Hanover National Bank	.....	180.00
Imp't bond int. acc't Nat. Park Bank, New York	.....	2,367.28
Linnton Water acc't National Park bank, N. Y.	.....	797.50
Library fund	.....	9.54
Water fund	.....	136,175.68
Improvement Bond Sinking fund	.....	200,382.06
Improvement Bond Interest fund	.....	9,753.58
Park and Boulevard fund	.....	2,346.75
Mt. Hood Ry. & Power Co., Ordinance No. 22989	.....	1,000.00
Mt. Hood Ry. & Power Co.. permanent repair fd.	.....	1,000.00
Bill Distributors Badge fund	.....	241.00
Fire Boat and Fire Main fund	.....	108.03
Broadway Bridge fund	.....	6,075.19
Water Bond Sinking fund	.....	201,020.87
Water fund bond account	.....	22.95
Bonded Indebtedness Sinking fund	.....	824.74
Special Bridge fund	.....	21,923.70
Police Relief fund	.....	25.35
Redemption fund	.....	1,001.19
Special 1916 Tax fund	.....	2,303.21
Public Auditorium fund	.....	14,673.07
Street Extension Bond Sinking fund	.....	1,308.78
Street Extension Bond Interest fund	.....	24.08
Sinking fund	.....	29,698.86
Police Relief and Pension fund	.....	4,969.24
Stark Street Extension fund	.....	500.00
Street Improvement fund	.....	28,420.30
Sewer fund	.....	12,202.68
Street Extension fund	.....	14,783.20
Street and Sewer Interest fund	.....	889.04
Water Main fund	.....	4,838.98
Improvement Bond Sinking and Interest fund	.....	21.12
Improvement Bond Sinking fund, St. Johns	.....	9,988.60
Improvement Bond Interest fund, St. Johns	.....	987.15
Improvement Bond Sinking fund, Linnton	.....	6.57
	$1,376,432.21	$1,376,432.21

Respectfully submitted,

WM. ADAMS,
City Treasurer.

December 14, 1915.

ANNUAL REPORT

OF

THE OFFICE OF THE CITY AUDITOR

FOR THE FISCAL YEAR ENDING
NOVEMBER 30, 1915

	Balance Dec. 1, 1914	Received by Transfer	Receipts	Disbursements	Disbursed by Transfer	Balance Nov. 30, 1915	Warrants Outstanding Dec. 1, 1914	Warrants Drawn	Warrants Paid	Warrants Outstanding Nov. 30, 1915	Warrants Cancelled
1. General Fund	$ 844,060.04	$ 10,355.89	$ 2,368,531.72	$ 2,564,667.91	$ 103,046.47	$ 555,233.27	209,058.84	2,529,375.73	2,550,140.41	183,257.94	5,036.22
2. Fire Department Fund	107.90				107.90						
3. Police Department Fund	44.27				44.27						
4. Bonded Indebtedness Interest Fund	105,448.83	401.20	316,273.02	280,349.40	36,580.00	105,193.65		129.40	129.40		
5. Chemical National Bank, N. Y.	5,055.00	33,400.00		33,980.00		4,475.00					
6. Harris, Forbes & Co., N. Y.	1,620.00	3,000.00		4,320.00		300.00					
7. Hanover National Bank, N. Y.		180.00				180.00					
8. Street Repair Fund	209.44				209.44						
9. Public Library Fund	40.59		9.54	40.59		9.54	40.59		40.59		
10. Park Fund	78.42				78.42						
11. Special Bridge Fund	3,669.93	81.11	26,057.17	7,475.07	409.44	21,923.70	583.83	7,435.24	7,475.07	544.00	
12. Sinking Fund	11,094.39	303.93	154,812.63	136,512.09		29,698.86		136,512.09	136,512.09		
13. Street Cleaning and Sprinkling Fund	26.15				26.15						
14. Water Fund	58,235.61	7,859.19	1,284,132.80	1,006,284.34	207,767.58	136,175.68	36,944.52	706,133.33	715,251.84	27,682.86	143.15
*15. Chase National Bank, N. Y.	150.00	3,000.00		3,060.00		90.00					
*16. Harris, Forbes & Co., N. Y.	5,910.00	12,000.00		17,640.00		270.00					
*17. National Park Bank, N. Y.		4,345.00		3,547.50		797.50					
18. Water Bond Sinking Fund	136,410.87		192,860.00	128,250.00		201,020.87		128,250.00	128,250.00		
19. Police and Fire Dept. Relief Fund	25.35					25.35	25.35			25.35	
20. Redemption Fund	1,243.32	349.86	16,548.39	17,140.38		1,001.19	1,148.18	16,285.74	17,140.38	293.54	
21. Water Fund, Bond Account	22.95					22.95	22.95			22.95	
22. Park and Boulevard Fund	9,134.67	356.25	.22	7,144.39		2,346.75	127.84	7,215.53	7,144.39	198.98	
23. Broadway Bridge Fund	5,133.55	1,182.00		195.91	44.45	6,075.19	24.07	195.91	195.91	24.07	
24. Fire Boat and Fire Mains Fund	108.03					108.03					
25. Bill Posting Badge Fund	218.00		76.00	53.00		241.00					
a26. Mt. Hood Ry. & Power Co. Deposit Fund	3,000.00			2,000.00		1,000.00		2,000.00	2,000.00		
b27. Mt. Hood Ry. & Power Co. St. Repair Fund	1,000.00					1,000.00					
28. Street Improvement Fund	25,494.91	1,305.03	1,058,384.35	1,056,763.99		28,420.30	443,710.84	1,021,772.44	1,056,763.99	338,269.34	70,449.95
29. Sewer Funds	12,370.96	1,966.40	212,139.71	214,233.67	40.72	12,202.68	40,910.08	252,296.80	214,233.67	41,605.02	37,368.19
30. Street Extension Funds	6,174.54		12,576.38	3,867.72	100.00	14,783.20	4,971.44	2,247.50	3,867.72	2,549.67	801.55
31. Stark Street Extension Fund			500.00			500.00					
32. Water Main Funds	4,762.08		76.90			4,838.98	6,136.25			6,136.25	
33. Street and Sewer Interest Fund	875.42	6,511.16	5,806.56	12,304.10		889.04		5.77	5.77		
34. Improvement Bond Sinking Fund	203,608.49	188,326.83	2,020,233.16	2,211,619.75	166.67	200,382.06	257.68	977.05	1,058.13	176.60	
35. Improvement Bond Interest Fund	39,711.47	83,075.20	672,519.22	779,123.90	6,428.41	9,753.58	132.37	343.11	369.61	105.87	
c36. National Park Bank, N. Y.		7,168.16		4,800.88		2,367.28					
37. Imp. Bond Skg. and Imp. Bond Int. Fund			21.12			21.12					
38. Bonded Ind. Sinking Fund	644.74		180.00			824.74					
39. Special Tax Fund, 1915	2,880.61		4.34	247.34	2,637.61			247.34	247.34		
40. Special Tax Fund, 1916			2,303.21			2,303.21					
41. Street Extension Bond Sinking Fund	390.54		918.24			1,308.78					
42. Street Extension Bond Interest Fund	34.02		311.59	321.53		24.08					
43. Public Auditorium Fund	24,584.49		403.66	10,300.00	15.08	14,673.07		10,300.00	10,300.00		
44. Police Relief Fund	3,201.45		3,388.99	1,621.20		4,969.24	195.79	1,541.39	1,621.20	51.75	64.23
45. Imp. Bond Sinking Fund of St. Johns			9,988.60			9,988.60					
46. City Hall Fund of St. Johns			150.07		150.07						
47. Interest Coupon Fund of St. Johns			150.00		150.00						
48. Street and Sewer Int. Fund of St. Johns			11.16		11.16						
49. Imp. Bond Int. Fund of St. Johns			2,044.17		1,057.02	987.15					
50. Maintenance Fund, Linnton			5.93		5.93						
51. First Extension Fund, Linnton			6,049.28		6,049.28						
52. Water Fund, Linnton			41.14		41.14						
53. Imp. Bond Sinking Fund, Linnton			6.57			6.57					
Totals	$1,516,781.03	365,167.21	8,367,515.84	8,507,864.66	365,167.21	1,376,432.21	744,290.62	4,823,264.37	4,852,747.51	600,944.19	113,863.29

*Custodians of Funds in New York, to pay interest on Water Bonds.
aAmount deposited as required by Ord. 22989.
bAmount deposited as guarantee that streets disturbed in constructing conduits, will be properly replaced.
cCustodians of funds in New York, to pay interest on St. Johns Bonds.

GENERAL FUND

Balance December 1, 1914	$.....	$ 844,060.04
RECEIPTS		
Property taxes:		
Taxes, 1915	1,568,414.28	
Delinquent taxes	51,608.27	
St. Johns taxes, 1915	11,485.37	
Linnton taxes, 1915	10,715.42	1,642,223.34
Interest on deposits:		
Daily balances	12,795.07	
Certificate of deposits	4,500.00	
Warrants held by City	1,235.79	18,530.86
Licenses:		
Liquor	291,213.50	
General	64,009.91	
Milk and cream	1,792.50	
Vehicle	24,991.70	
Dog	15,050.00	
Kennell	5.00	
Registration of electrical contractors	1,900.00	
Transfer of liquor licenses	140.00	399,102.61
Franchises:		
S., P. & S. Railway	500.00	
Southern Pacific Company	2,500.00	
Oregon Electric Company	1,285.00	
United Railway Company	2,200.00	
Portland Railway, Light & Power Company	11,973.00	
Oregon-Washington R. R. & N. Co.	251.00	
Central Heating Company	50.00	
Home Telephone & Telegraph Company	3,378.93	
Pacific Telephone & Telegraph Company	1,000.00	
Mt. Hood Railway & Power Co., Deposit Fund	2,000.00	
Portland Central Heating Co.	5.00	
Norhtwestern Electric Company	7,338.40	32,481.33
Use of bridges by Street Railway Company	.....	52,725.57
Fines and fees:		
Municipal Court	28,158.20	
Pound fees	1,451.35	
Building permits	12,784.95	
Sidewalk permits	950.50	
Birth and death certificates	154.65	
Driveway permits	81.50	
Southern Pacific Company, use of streets	25.00	
Portland Railway, Light & Power Company, use of streets	60.00	
Grading permits	140.00	
Bill board permits	79.50	
Plumbing permits	2.00	
Curb iron permits	1.00	
Badges	173.35	
Receipts from telephone booths	10.71	
Receipts from comfort station	248.99	
Receipts from public market	5,893.55	
Concessions	1,845.00	
Appeal from building inspector's decision	60.00	
Fines, County Clerk	716.70	52,836.95
Public improvements:		
Cost engineering, advertising, inspection, etc.	63,611.36	
Premium on bonds	47,598.88	
Cost advertising delinquent assessments	864.58	
Contractors penalized	455.00	
Interest on street extensions	34.71	
Rolling streets	860.55	
Purchase of right-of-way	3,015.22	116,440.30
Sale of personal property and contributions for services performed:		
Cutting weeds	1,090.73	
Construction of sidewalks	12,740.16	
Removing earth	785.41	
Certified copies	143.40	
Blue prints	367.89	

GENERAL FUND—Continued

City charters	$ 18.80	$.....
Compression tests	82.75	
Duplicate license tags	7.25	
Public Dock Commission stationery	629.96	
Jury fees, W. J. Sovern	74.60	
Sale of Electric Codes	22.52	
Grappler services	68.50	
Sale of St. Johns wood	1,312.95	
Sale of City wood	13,741.45	
Witness fees:		
R. C. Flanders $ 1.60		
S. Grutze 2.10		
Wm. Adams 2.10		
L. E. Burdick 12.40		
H. R. Albee 4.20		
W. H. Daly 2.10		
W. L. Brewster 2.10		
C. A. Bigelow 2.10		
C. H. Smith 2.00		
A. L. Barbur 2.10		
Mrs. E. T. Colwell 1.60	34.40	31,130.77
Sale of property:		
A. D. Moodie, hook and ladder	20.00	
Old skiffs	6.00	
Canary bird	2.50	
Old horse	35.00	
Bridge material	31.50	
Guinea pigs	23.50	
Sacks sold	2,055.98	
Antitoxin	120.25	
Sale of horses	307.50	
Metal life boat	17.00	
Asphalt separator	10.50	
Old Iron	143.16	
Morris canoe	19.50	
Bridge railing	182.00	
Sprinkler wagon, etc.	550.00	
Sale of junk	320.85	
Crushed rock	163.82	
Cedar log	13.25	
School signs	127.89	
Buick car	215.00	
Velie car	275.00	
Ford Runabout	180.00	
Repairs to pavements	423.93	5,244.13
Rents and leases:		
Domino Friear, 5th and Arthur	10.00	
Storage of launch	2.50	
Gerlinger Motor Co., block 132	25.00	
S. P. Co., Jefferson Street levee	3,849.96	3,887.46
Refunds:		
Ford Motor Car Co., mdse. returned	60.54	
Warren Construction Co.	93.67	
Wells Fargo Co., rebate	3.68	
O. R. & N. Co., overpayment Steel bridge	119.35	
Goodyear Tire Company	2.52	
Great Northern Express Company	6.35	
Western Union Telegraph Co.	2.21	
J. H. Knowles, car tickets	4.00	
Portland Gas & Coke Co.	9.70	
W. P. La Roche, Ballin vs. City	.13	
Commission of Public Docks, Sylvan taxes	72.32	
Citizens Employment Committee	1,108.05	
Ambrose Appeal	5.00	
M. B. Marcellus, balance appropriation for trip to fair	12.05	
W. McCamant, account Liberty Bell	1.51	
Enterprising Planing Mill	.10	
Covey Motor Car Co., material	1.80	
Standard Oil Company	24.00	

GENERAL FUND—Continued

Paul Keyser, adv. money	$ .83	$.....
Ford Motor Car Co., profit coupons	350.00	
Marshall Wells Hardware Co., mdse. returned	4.87	
C. P. Leehan, salary	44.52	
Portland Gas & Coke Co., discount	11.15	
Firestone Tire & Rubber Co.	5.60	1,943.95
Refunds of insurance:		
Dooley & Company	37.64	
I. L. Webster	34.61	
Dunne & Reynolds	48.64	
N. W. Rountree	34.61	
J. B. Ogden	72.76	
J. Pettis	55.16	
Carlock & Muellhaupt	34.61	
Oregon Home Builders	33.21	
R. E. Menefee	34.61	
I. L. White	56.70	
G. H. Thomas	36.03	
Everett & Company	50.85	
Ritter, Lowe & DeForrest	51.20	
G. L. Story	50.85	
Henry Hewitt	53.00	
H. P. Jones	15.88	
J. H. Corbin	30.91	
Callan & Kaser	36.32	
F. L. McGuire	59.00	
Hartman & Thompson	85.75	912.34
Miscellaneous:		
Redecking Union Avenue Bridge	66.50	
Damage to cart, Royce Auto Co.	4.75	
Donation market sheds	3,891.00	
Damage to Sweeper J. D. Gussi	9.35	
Damage to bridge, P. R. L. & P. Co.	26.31	
Photographic work	8.30	
Receipts from playgrounds	2.50	
Flushing track, K. Y. Azar	15.68	
J. Pittinger, postage on book	.60	
U. S. Marshal, use of patrol boat	5.00	
Warrant held by City	7.85	
S. P. Co., repairs to police auto	661.75	
P. R. L. & P. Co., repairs to Union Avenue bridge	211.35	
Receipts from jitney bus	7.75	
St. Vincent's Hospital, repairs to sewer	12.17	
Repairs to tractor	57.73	
Multnomah County, resurface road	150.00	
Percy & Strickler Co., final dividend	.38	
A. Bellerts, damage to truck	10.32	
First National Bank, survey work	19.80	
P. R. L. & P. Co., damage to sprinkler	65.00	
Vending machine	2.46	
Nick Krout, damage to Hose	4.44	
Linnton General Fund	1,239.87	
St. Johns General Fund	3,075.28	
P. R. L. & P. Co., damage to flusher	5.34	
Multnomah County, account Liberty Bell	125.00	
N. P. Terminal, rounding curb corners	10.00	
W. McCamant, account Liberty Bell platform	142.74	
M. Heller, oiling track	20.00	
U. S. National Bank, unclaimed checks	11.92	
P. R. L. & P. Co., repairs to Stark street	201.08	
Replacing steel sign	.20	
Bureau of Health prize money	100.00	
Capt. Smith convict ship	20.00	
Portland Gas Co., rolling ditches	31.07	
Chief of Police, keep of persons, phone, etc.	134.81	
Chas. Solomon, repairs to sewer	1.10	
Storage of launch	2.50	
G. Gordon, constructing laterals	12.90	

GENERAL FUND—Continued

Recording permits	$ 12.30	$.....
S., P. & S. Co., repairs to Union Ave. bridge	400.00	
Ira Beeman, drawings	2.20	
Spraying trees	3.00	
Maps	.45	
Redemption of property	3.11	
Public Library, storage of car	19.47	
Laurelhurst Co., repairs to trees	51.00	
Commission of Public Docks, repairs to dock	100.00	
A. R. Atwood, repairs to sidewalk	6.52	
C. E. Atlas, use of city car	4.32	
Cleaning sewers	15.13	
Building fence at gravel pit	22.95	
H. Kipper, damage to sweeper	19.50	
Hospital service	3.00	
Accrued interest on Linnton Bonds	44.06	
Chicago Market, final dividend	.30	11,082.11
		$ 3,212,591.76
Transfers:		
Public Auditorium Fund	15.08	
Special Tax Fund, 1915	2,048.70	
Fire Department Fund	107.90	
Police Department Fund	44.27	
Street Repair Fund	209.44	
Park Fund	78.42	
Street Cleaning and Sprinkling Fund	26.15	
Water Fund	6,561.37	
Broadway Bridge Fund	23.96	
Special Bridge Fund	409.44	
1st Extension Fund of Linnton	797.53	
Maintenance Fund of Linnton	5.93	
E. 33rd St. Extension of Sullivan Gulch Sewer	27.10	
Sewer, E. 26th St. at Brazee St.	.60	10,355.89
		$ 3,222,947.65

DISBURSEMENTS

Crematory bonds redeemed	$ 10,800.00	
Interest paid on crematory bonds	3,675.00	
Hotel runners' badges redeemed	52.50	
Transfers:		
Improvement Bond Sinking Fund	6,465.62	
Improvement Bond Inerest Fund	82,607.93	
Street and Sewer Interest Fund	6,500.00	
Special Bridge Fund	26.77	
Water Fund	2,566.30	
Park and Boulevard Fund	356.25	
Redemption Fund	70.17	
Broadway Bridge Fund	1,182.00	
Improvement Skidmore Street, et. al.	14.19	
Improvement Division Street—East 10th to East 41st St.	70.44	
Improvement East 32nd Street—Division to E. Sherman St.	5.26	
Dist. Improvement Ladd Ave.—Division St. to Central Park	757.22	
Improvement Karl Street	457.92	
Canyon Road Extension of Tanner Creek Sewer	1,966.40	
Warrants paid and returned	2,550,140.41	
Balance November 30, 1915	$ 555,233.27	$ 3,222,947.65

FIRE DEPARTMENT FUND

Balance December 1, 1914	$.....	$ 107.90
Disbursements:		
Transferred to General Fund	.....	107.90

POLICE DEPARTMENT FUND

Balance December 1, 1914	$.....	$ 44.27
Disbursements:		
Transferred to General Fund	.....	44.27

STREET REPAIR FUND

Balance December 1, 1914	$.....	$ 209.44
Disbursements:		
Transferred to General Fund	.....	209.44

PARK FUND

Balance December 1, 1914	$.....	$ 78.42
Disbursements:		
Transferred to General Fund	.....	78.42

STREET CLEANING AND SPRINKLING FUND

Balance December 1, 1914	$.....	$ 26.15
Disbursements:		
Transferred to General Fund	.....	26.15

BONDED INDEBTEDNESS INTEREST FUND

Balance December 1, 1914	$ 105,448.83	
Receipts:		
Delinquent taxes	9,126.73	
Taxes, 1915	307,145.39	
Excess commission on warrant No. 997	.90	
Transferred from Special Tax Fund 1915	401.20	$ 422,123.05
Disbursements:		
Transferred to Chemical Nat'l Bank	$ 33,400.00	
Transferred to Harris, Forbes & Co., New York	3,000.00	
Transferred to Hanover National Bank	180.00	
Interest coupons paid	280,220.00	
Warrants paid and returned	129.40	
Balance November 30, 1915	105,193.65	$ 422,123.05

APPROPRIATION PAYMENT OF INTEREST

Appropriation	.....	$ 329,653.50
Interest paid and warrants drawn:		
Warrants drawn, commissions	$ 129.40	
Interest coupons paid	280,220.00	
Transferred to New York accounts	36,580.00	
Deduct miscellaneous credits	.90	
Unexpended balance	12,725.00	$ 329,653.50

GENERAL BONDED INDEBTEDNESS.

Statement of Interest Coupons Outstanding November 30, 1914, and Due, Paid and Outstanding November 30, 1915.

Name of Bonds	Outstanding Nov. 30, 1914	Due During Year	Paid During Year	Outstanding Nov. 30, 1915
Funding	.....	$23,760.00	23,760.00	.....
City Hall	$ 450.00	34,050.00	34,025.00	475.00
Bridge	945.00	137,680.00	138,270.00	355.00
Ferry	95.00	5,430.00	5,495.00	30.00
Park and Boulevard	20.00	40,000.00	40,020.00	.....
New Water	.....	50,000.00	50,000.00	.....
Fire Boat and Fire Mains	.....	5,000.00	5,000.00	.....
Municipal Jail	360.00	8,000.00	7,800.00	560.00
Auditorium	.....	1,400.00	1,400.00	.....
East Portland, Light	1,620.00	3,000.00	4,320.00	300.00
Albina, General and Park & Boulevd.	30.00	8,400.00	8,430.00	.....
	$3,520.00	$316,720.00	$318,520.00	$1,720 00

CHEMICAL NATIONAL BANK, NEW YORK

Balance December 1, 1914	$ 5,055.00	
Receipts:		
Transferred from Bonded Indebtedness Interest Fund	33,400.00	$ 38,455.00
Disbursements:		
Interest coupons paid	$ 33,980.00	
Balance November 30, 1915	4,475.00	$ 38,455.00

HARRIS, FORBES & COMPANY, NEW YORK

Balance December 1, 1914	$ 1,620.00	
Receipts:		
Transferred from Bonded Indebtedness Interest Fund	3,000.00	$ 4,620.00
Disbursements:		
Interest coupons paid	$ 4,320.00	
Balance November 30, 1915	300.00	$ 4,620.00

HANOVER NATIONAL BANK, NEW YORK

Receipts:		
Transferred from Bonded Indebtedness Interest Fund	$.....	$ 180.00
Disbursements:		
Balance November 30, 1915	.....	180.00

SINKING FUND

Balance December 1, 1914	$ 11,094.39	
Receipts:		
Delinquent taxes	3,551.88	
Taxes, 1915	117,792.96	
Interest on daily balances	560.54	
Interest on Water Bonds	11,075.00	
Interest on Improvement Bonds	14,744.94	
Interest on Street Extension Bonds	127.31	
Crematory Bonds cashed	5,800.00	
Interest on Crematory Bonds	1,160.00	
Transferred from Special Tax Fund, 1915	153.86	
Transferred from City Hall Fund, St. Johns	150.07	$ 166,210.95
Disbursements:		
Purchase of securities	$ 136,512.09	
Balance November 30, 1915	29,698.86	$ 166,210.95

APPROPRIATION, PURCHASE OF SECURITIES, SINKING FUND

Appropriation		$ 165,124.60
Claims audited and warrants drawn:		
Purchased of securities	$ 136,512.09	
Unexpended balance	28,612.51	$ 165,124.60

SPECIAL BRIDGE FUND

Balance December 1, 1914	$ 3,669.93	
Receipts:		
Delinquent taxes	65.32	
Taxes, 1915	25,991.84	
Excess on warrant	.01	
Transferred from Special Tax Fund 1915	33.85	
Transferred from General Fund	26.77	
Transferred from Broadway Bridge Fund	20.49	$ 29,808.21
Disbursements:		
Transferred to General Fund	$ 409.44	
Warrants paid and returned	7,475.07	
Balance November 30, 1915	21,923.70	$ 29,808.21

APPROPRIATION, ELIMINATION OF GRADE CROSSINGS

Appropriation		$ 28,196.95
Claims audited and warrants drawn:		
(a) Personal service	$ 7,288.36	
(b) Supplies	472.06	
(d) Equipment	1.00	
E2 and 3, Repairs	6.00	
E6 and 7, Transportation and Communication	30.00	
Unexpended balance	20,399.53	$ 28,196.95

WATER FUND

Balance December 1, 1914	$ 58,235.61	
Receipts:		
Collection of water rates	708,344.75	
Interest on daily balances	6,050.19	
Repairs to meters	92.60	
Repairs to water mains	917.07	
Accrued interest on bonds sold	1,175.56	
Sale of bonds	560,800.00	
Sale of material	5,641.68	
Refund by City Attorney	503.65	
Removing hydrant	127.80	
Resetting fountain	18.65	
Inspection of mains	64.00	
Refund on warrant	1.00	
Refund Covey Motor Car Co.	5.00	
Installing gate at Oregon City	42.65	
Rent of pumping station	125.00	
Refund by Eccles & Smith	3.20	
National Park Bank, acct. Town of Linnton	220.00	
Transferred from General Fund	2,566.30	
Transferred from Linnton, 1st Extension Fund	5,251.75	
Transferred from Linnton Water Fund	41.14	$ 1,350,227.60
Disbursements:		
Transferred to General Fund	$ 6,561.37	
Transferred to Improvem't Bond Sinking Fund	181,861.21	
Transferred to Chase National Bank	3,000.00	
Transferred to Harris, Forbes & Co.	12,000.00	
Transferred to National Park Bank	4,345.00	
Interest Coupons paid	291,032.50	
Warrants paid and returned	715,251.84	
Balance November 30, 1915	136,175.68	$ 1,350,227.60

CHASE NATIONAL BANK, NEW YORK

Balance December 1, 1914	$ 150.00	
Transferred from Water Fund	3,000.00	$ 3,150.00
Disbursements:		
Interest coupons paid and returned	$ 3,060.00	
Balance November 30, 1915	90.00	$ 3,150.00

HARRIS, FORBES & COMPANY, NEW YORK

Balance December 1, 1914	$ 5,910.00	
Transferred from Water Fund	12,000.00	$ 17,910.00
Disbursements:		
Interest coupons paid and returned	$ 17,640.00	
Balance November 30, 1915	270.00	$ 17,910.00

NATIONAL PARK BANK, NEW YORK

Receipts:		
Transferred from Water Fund	$.....	$ 4,345.00
Disbursements:		
Interest coupons paid and returned	3,547.50	
Balance November 30, 1915	797.50	$ 4,345.00

DEPARTMENT OF PUBLIC UTILITIES
BUREAU OF WATER WORKS

	Personal Service	
A-1	Salaries	$ 296,389.34
A-2	Special services	5,007.22
	Supplies	
B-1	Office	4,503.91
B-2	Fuel	2,093.97
B-3	Forage and veterinary	1,063.76
B-4	Food	955.44
B-5	Cleaning and disinfecting	112.17
B-6	Motor vehicle	3,820.28
B-7	Botanical and agricultural	51.25
B-10	General plant	1,281.24
	Material	
C-3	Building	3,981.78
C-4	General plant	175,350.61
	Equipment	
D-1	Office	500.33
D-2	Household	130.30
D-4	Motorless vehicle	178.99
D-5	Motor vehicles	538.43
D-7	Tools	805.55
D-8	General plant	7,805.76
	Contract and Open Order Service	
E-1	Construction and extension	30.60
	Repairs	
E-2	General	7,503.25
E-3	Motor vehicle	1,168.15
	Light, Heat and Power	
E-4a	Light	257.24
E-4c	Heat	2,448.99
	Transportation and Communication	
E-6a	Hire of horses and vehicles	1,550.85
E-6b	Hire of automobiles	* 247.47
E-6c	Storage of motor vehicles	130.41
E-6d	Shoeing and boarding of horses	529.55
E-6e	Car fare	1,122.10
E-6f	Other transportation	280.45
E-7a	Telephone	603.10
E-7b	Telegraph, cable and messenger service	19.39
F	**Contingencies**	14,121.53
	Fixed Charges and Contributions	
G-1a	Interest on bonds	310,377.50
G-1b	Sinking Fund	143,880.00
G-2	Rent	503.00
G-4	Insurance	59.37
G-5	Advertising	137.20
G-6	Other fixed charges	184.50
H	Purchase of real estate	900.00
	Special Appropriations	
	Refund of meter deposits	17,270.50
	Payment of Linnton Claims	1,182.84
		$ 1,008,583.38

*Credits deducted.

DEPARTMENT OF PUBLIC UTILITIES
BUREAU OF WATER WORKS—Continued

	Warrants drawn, account 1915	$ 695,752.18
	Add miscellaneous debits	6,561.37
	Deduct miscellaneous credits	4,107.67
	Interest coupons charged	310,377.50
	Outstanding claims	19,002.76
		$ 1,027,586.14
	Total appropriation	1,300,782.66
	Unexpended balance	$ 273,196.52

BUREAU OF WATER WORKS

Expenditures authorized during 1914, paid during 1915

	Personal Service		
A-2	Special services	$ 233.69	
	Supplies		
B-1	Office	264.31	
B-2	Fuel	86.39	
B-5	Cleaning and disinfecting	1.00	
B-6	Motor vehicle	78.46	
B-10	General plant	39.45	
C	**Material**		
	Building	218.52	
	General plant	2,391.58	
D	**Equipment**		
	Motor vehicle	140.62	
	General plant	246.12	
	Contract and Open Order Service		
E-1	Construction and extension	5,326.18	
	Repairs		
E-2	General	532.96	
E-3	Motor vehicle	8.75	
E-4	Light, heat and power	107.13	
	Transportation and Communication		
E-6a	Hire of horses and vehicles	79.40	
E-6d	Shoeing and boarding of horses	31.00	
F	**Contingencies**	110.34	
	Fixed Charges and Contributions		
G-2	Rent	18.50	
	Special Appropriations		
	Refund meter deposits	466.75	10,381.15
	Total appropriation		$10,381.15

WATER BOND SINKING FUND

Balance Dec. 1, 1914	$ 136,410.87	
Receipts:		
Interest on improvement bonds	40,080.00	
Interest on water bonds	2,400.00	
Interest on crematory bonds	1,500.00	
Crematory bonds cashed	5,000.00	
2% of water debt	143,880.00	$ 329,270.87
Disbursements:		
Purchase of securities	$ 128,250.00	
Balance Nov. 30, 1915	201,020.87	$ 329,270.87

APPROPRIATION, PURCHASE OF SECURITIES WATER BOND SINKING FUND

Appropriation	$.....	$ 138,400.87
Claims Audited and Warrants Drawn:		
Purchase of securities	128,250.00	
Unexpended balance	10,150.87	138,400.87

REDEMPTION FUND

Balance Dec. 1, 1914	$ 1,243.32	
Receipts:		
Redemption of property	16,548.39	
Transferred from Street Extension fund	100.00	
Transferred from General fund	70.17	
Transferred from Sewer fund	13.02	
Transferred from Imp't Bond Sinking fund	166.67	$ 18,141.57
Disbursements:		
Warrants paid and returned	$ 17,140.38	
Balance Nov. 30, 1915	1,001.19	$ 18,141.57

APPROPRIATION, REDEMPTION OF CERTIFICATES

Appropriation	$.....	$ 25,960.44
Claims Audited and Warrants Drawn:		
Redemption of certificates	16,285.74	
Unexpended Appropriation	9,674.70	$ 25,960.44

BILL POSTING BADGE FUND

Balance Dec. 1, 1914	$ 218.00	
Receipts:		
Sale of badges	76.00	$ 294.00
Disbursements:		
Badges redeemed	$ 53.00	
Balance Nov. 30, 1915	241.00	$ 294.00

STREET IMPROVEMENT FUND

Balance Dec. 1, 1914	$ 25,494.91	
Receipts:		
Sale of bonds	859,789.52	
Collection of assessments	198,594.83	
Transferred from General fund	1,305.03	$ 1,085,184.29
Disbursements:		
Warrants paid and returned	$ 1,056,763.99	
Balance Nov. 30, 1915	28,420.30	$ 1,085,184.29

SEWER FUNDS

Balance Dec. 1, 1914	$ 12,370.96	
Receipts:		
Sale of bonds	156,233.68	
Collection of assessments	55,906.03	
Transferred from General fund	1,966.40	$ 226,477.07
Disbursements:		
Transferred to General fund	$ 27.70	
Transferred to Redemption fund	13.02	
Warrants paid and returned	214,233.67	
Balance Nov. 30, 1915	12,202.68	$ 226,477.07

STREET EXTENSION FUNDS

Balance Dec. 1, 1914	$ 6,174.54	
Receipts:		
Sale of bonds	3,877.78	
Collection of assessments	8,698.60	$ 18,750.92
Disbursements:		
Transferred to Redemption fund	$ 100.00	
Warrants paid and returned	3,867.72	
Balance Nov. 30, 1915	14,783.20	$ 18,750.92

STARK STREET EXTENSION FUND

Receipts:		
Property owners' subscription	$.....	$ 500.00
Balance Nov. 30, 1915	.....	$ 500.00

WATER MAIN FUNDS

Balance Dec. 1, 1914	$ 4,762.08	
Receipts:		
Collection of assessments	76.90	$ 4,838.98
Disbursements:		
Balance Nov. 30, 1915	$.....	$ 4,838.98

STREET AND SEWER INTEREST FUND

Balance Dec. 1, 1914	$ 875.42	
Receipts:		
Transferred from General fund	6,500.00	
Trans. from St. & Sewer Int. fund, St. Johns	11.16	
Interest collected on assessments	5,806.56	$ 13,193.14
Disbursements:		
Interest paid on street and sewer warrants	$ 12,298.33	
Warrants paid and returned	5.77	
Balance Nov. 30, 1915	889.04	$ 13,193.14

IMPROVEMENT BOND SINKING FUND

Balance Dec. 1, 1914	$ 203,608.49	
Receipts:		
Transferred from General fund	6,465.62	
Transferred from Water fund	181,861.21	
Collections on bonded assessments	1,367,690.35	
Sale of bonds held by city	652,542.81	$ 2,412,168.48
Disbursements:		
Transferred to Redemption fund	$ 166.67	
Receipt No. 88250 canceled	42.07	
Improvement bonds redeemed	2,210,519.55	
Warrants paid and returned	1,058.13	
Balance Nov. 30, 1915	200,382.06	$ 2,412,168.48

IMPROVEMENT BOND INTEREST FUND

Balance Dec. 1, 1914	$ 39,711.47	
Receipts:		
Transferred from General fund	82,607.93	
Transferred from St. Johns Int. Coupon fund	150.00	
Transferred from St. Johns Bond Int. fund	317.27	
Interest collected on bonded liens	646,542.92	
Interest on bonds held by the city	20,306.05	
Interest on daily balances	5,670.25	$ 795,305.89
Disbursements:		
Interest paid on improvement bonds	$ 778,736.62	
Warrants paid and returned	369.61	
Transferred to National Park Bank, N. Y.	6,428.41	
Receipt No. 88250 canceled	17.67	
Balance Nov. 30, 1915	9,753.58	$ 795,305.89

NATINAL PARK BANK, NEW YORK

Receipts:		
Transferred from Improvement Bond Int. fund	$.....	$ 7,168.16
Disbursements:		
Interest coupons paid and returned	$ 4,800.88	
Balance Nov. 30, 1915	2,367.28	$ 7,168.16

STREET EXTENSION BOND SINKING FUND

Balance Dec. 1, 1914	$ 390.54	
Receipts:		
Collection of assessments	918.24	$ 1,308.78
Disbursements:		
Balance Nov. 30, 1915	$	$ 1,308.78

STREET EXTENSION BOND INTEREST FUND

Balance Dec. 1, 1914	$ 34.02	
Receipts:		
Interest on assessments	311.59	$ 345.61
Disbursements:		
Interest paid on street extension bonds	$ 321.53	
Balance Nov. 30, 1915	24.08	$ 345.61

PUBLIC AUDITORIUM FUND

Balance Dec. 1, 1914	$ 24,584.49	
Receipts:		
Interest on daily balances	403.66	$ 24,988.15
Disbursements:		
Transferred to General fund	$ 15.08	
Warrants paid and returned	10,300.00	
Balance Nov. 30, 1915	14,673.07	$ 24,988.15

APPROPRIATION, CONSTRUCTION OF PUBLIC AUDITORIUM

Appropriation	$	$ 18,118.67
Claims Audited and Warrants Drawn:		
Architect's fees	10,300.00	
Unexpended balance Nov. 30, 1915	7,818.67	$ 18,118.67

POLICE AND FIRE DEPARTMENT RELIEF FUND

Balance Dec. 1, 1914	$	$ 25.35
Balance Nov. 30, 1915		$ 25.35

WATER FUND BOND ACCOUNT

Balance Dec. 1, 1914		$ 22.95
Balance Nov. 30, 1915	$	$ 22.95

PARK AND BOULEVARD FUND

Balance Dec. 1, 1914	$ 9,134.67	
Receipts:		
Refund from cash advanced	.22	
Transferred from General fund	356.25	$ 9,491.14
Disbursements:		
Warrants paid and returned	$ 7,144.39	
Balance Nov. 30, 1915	2,346.75	$ 9,491.14

APPROPRIATION, PURCHASE OF PARKS AND ESTABLISHMENT OF BOULEVARDS

	Appropriation	$.....	$ 9,006.83
	Claims Audited and Warrants Drawn		
A	Personal service	75.00	
B	Supplies	147.83	
C	Material	730.77	
D	Equipment	1.96	
E-1	Construction and extension	5,893.75	
E-2-3	Repairs	9.75	
	Unexpended balance	2,147.77	$ 9,006.83

FIRE BOAT AND FIRE MAINS FUND

Balance Dec. 1, 1914	$.....	$ 108.03
Balance Nov. 30, 1915	.....	$ 108.03

BROADWAY BRIDGE FUND

Balance Dec. 1, 1914	$ 5,133.55	
Receipts:		
Transferred from General fund	1,182.00	$ 6,315.55
Disbursements:		
Transferred to Special Bridge fund	$ 20.49	
Transferred to General fund	23.96	
Warrants paid and returned	195.91	
Balance Nov. 30, 1915	6,075.19	$ 6,315.55

APPROPRIATION, CONSTRUCTION OF BROADWAY BRIDGE

	Appropriation	$.....	$ 133.55
	Claims Audited and Warrants Drawn		
A	Personal service	25.13	
C	Material	15.97	
	Unexpended balance	92.45	$ 133.55

APPROPRIATION, FIREPROOFING BROADWAY BRIDGE

	Appropriation	$.....	$ 6,000.00
	Claims Audited and Warrants Drawn		
A	Personal service	175.30	
B	Supplies	23.96	
	Unexpended balance	5,800.74	$ 6,000.00

MT. HOOD RAILWAY & POWER CO. DEPOSIT FUND

Balance Dec. 1, 1914	$.....	$ 3,000.00
Disbursements:		
Warrants paid and returned	2,000.00	
Balance Nov. 30, 1915	1,000.00	$ 3,000.00

APPROPRIATION, PAYMENT OF FRANCHISE

Appropriation	$.....	$ 2,000.00
Claims Audited and Warrants Drawn:		
Payment of franchise Ord. 22989	.....	$ 2,000.00

APPROPRIATION, PURCHASE OF BONDS

Appropriation	$.....	$ 3,000.00
Appropriation cancelled	2,000.00	
Unexpended balance	1,000.00	$ 3,000.00

MT. HOOD RAILWAY & POWER CO. STREET REPAIR FUND

Balance Dec. 1, 1914	$.....	$ 1,000.00
Balance Nov. 30, 1915	.....	$ 1,000.00

SPECIAL TAX FUND 1915

Balance Dec. 1, 1914	$ 2,880.61	
Receipts:		
Interest on daily balances	4.34	$ 2,884.95
Disbursements:		
Transferred to General fund	$ 2,048.70	
Transferred to Bonded Indebtedness Int. fund	401.20	
Transferred to Sinking fund	153.86	
Transferred to Special Bridge fund	33.85	
Warrants paid and returned	247.34	$ 2,884.95

APPROPRIATION, DISTRIBUTION OF 1915 TAX

Appropriation	$.....	$ 247.34
Claims Audited and Warrants Drawn:		
Firemen's Relief and Pension fund	38.47	
Public Docks fund	208.87	$ 247.34

SPECIAL TAX FUND 1916

Receipts:		
Taxes paid in advance	$.....	$ 2,303.21
Balance Nov. 30, 1915	.....	$ 2,303.21

BONDED INDEBTEDNESS SINKING FUND

Balance Dec. 1, 1914	$ 644.74	
Receipts:		
Interest on Improvement bonds	180.00	$ 824.74
Balance Nov. 30, 1915	.....	$ 824.74

PUBLIC LIBRARY FUND

Balance Dec. 1, 1914	$ 40.59	
Receipts:		
Delinquent taxes	9.54	$ 50.13
Disbursements:		
Warrants paid and returned	$ 40.59	
Balance Nov. 30, 1915	9.54	$ 50.13

APPROPRIATION EXPENSE LIBRARY

Appropriation	$.....	$ 1,206.08
Unexpended balance	.....	$ 1,206.08

POLICE RELIEF FUND

Balance Dec. 1, 1914	$ 3,201.45	
Receipts:		
Interest on daily balances	81.11	
Interest on bonds	452.88	
Donation, Failing estate	50.00	
Dues	1,805.00	
Improvement bonds cashed	500.00	
Proceeds of souvenir band	500.00	$ 6,590.44
Disbursements:		
Warrants paid and returned	$ 1,621.20	
Balance Nov. 30, 1915	4,969.24	$ 6,590.44

APPROPRIATION PAYMENT OF SICK BENEFITS

Appropriation	$.....	$ 3,116.11
Claims Audited and Warrants Drawn:		
Sick benefits and pensions paid	1,541.39	
Unexpended balance	1,574.72	$ 3,116.11

ST. JOHNS CITY HALL FUND

Balance received former city of St. Johns	$.....	$ 150.07
Disbursements:		
Transferred to Sinking fund	.....	$ 150.07

ST. JOHNS INTEREST COUPON FUND

Balance received former city of St. Johns	$.....	$ 150.00
Disbursements:		
Transferred to Improvement Bond Int. fund	.....	$ 150.00

ST. JOHNS STREET AND SEWER INTEREST FUND

Balance received former city of St. Johns	$.....	$ 11.16
Disbursements:		
Transferred to Street and Sewer Int. fund	$.....	$ 11.16

ST. JOHNS IMPROVEMENT BOND SINKING FUND

Balance received former city of St. Johns	$ 8,706.89	
Collections on assessments	1,281.71	$ 9,988.60
Balance Nov. 30, 1915	$	$ 9,988.60

ST. JOHNS IMPROVEMENT BOND INTEREST FUND

Balance received former city of St. Johns	$ 1,057.02	
Collected on assessments	987.15	$ 2,044.17
Disbursements:		
Transferred to National Park Bank, N. Y.	$ 739.75	
Transferred to Imp't bond Interest fund	317.27	
Balance Nov. 30, 1915	987.15	$ 2,044.17

LINNTON MAINTENANCE FUND

Balance received former city of Linnton	$	$ 5.93
Disbursements:		
Transferred to General fund	$	$ 5.93

LINNTON FIRST EXTENSION FUND

Balance received former city of Linnton	$	$ 6,049.28
Disbursements:		
Transferred to General fund	$ 797.53	
Transferred to Water fund	5,251.75	$ 6,049.28

LINNTON WATER FUND

Balance received former city of Linnton	$	$ 41.14
Disbursements:		
Transferred to Water fund	$	$ 41.14

LINNTON IMPROVEMENT BOND SINKING FUND

Collection on assessments	$	$ 6.57
Balance Nov. 30, 1915	$	$ 6.57

IMPROVEMENT BOND SINKING AND IMPROVEMENT BOND INTEREST FUND

Collection on assessments	$	$ 21.12
Balance Nov. 30, 1915	$	$ 21.12

TRIAL BALANCE NOV. 30, 1915

City of Portland	$30,391,839.59	$
Bonds		17,079,300.00
Improvement bonds		13,062,321.96
Street extension bonds		11,338.78
Improvement bonds of former city of St. Johns		297,498.36
Improvement bonds of former town of Linnton		24,999.53
Street and sewer warrants	83,619.04	
Wm. Adams, city treasurer, general account	1,375,432.21	
Wm. Adams, city treasurer, special account	1,000.00	
Imp't Bond Sinking and Imp't Bond Int. fund		21.12
Wm. Adams, treasurer, investment account	1,469,322.86	
Water Bond Sinking fund, investments		843,000.00
Bonded Indebtedness Sinking fund, investments		3,000.00
Sinking fund investments		616,024.78
Police Relief fund, investments		7,298.08
Revenue receivable taxes 1914	28,042.06	
Reserve for loss on taxes 1914		28,042.06
Revenue receivable taxes 1915	92,049.80	
Revenue General fund, taxes 1915		38,757.99
Revenue bonded Indebtedness Int. fd. taxes 1915		7,589.99
Revenue Sinking Fund, Taxes 1915		2,910.92
Revenue Special Bridge Fund, Taxes 1915		563.01
Reserve for loss on taxes 1915		42,227.89
John Clark chief of police	355.00	
Fugitive fund		355.00
Public Library fund		9.54
Appropriation, Public Library	1,206.08	
Appropriation, expense Library		1,206.08
Police and Fire Department Relief fund		25.35
Water fund, bond account		22.95
Park and Boulevard fund		2,346.75
Appropriation, Park and Boulevard fund	2,147.77	
Appropriation, purchase of parks and establishment of boulevards		2,147.77
Fire Boat and Fire Mains fund		108.03
Broadway Bridge fund		6,075.19
Appropriation, Broadway Bridge fund	5,893.19	
Appropriation, construction Broadway bridge		92.45
Appropriation, fireproofing Broadway bridge		5,800.74
Mt. Hood Ry. & Power Co. Deposit fund		1,000.00
Appropriation, Mt. Hood Ry. & Power Co. Deposit fund	1,000.00	
Appropriation, purchase of bonds		1,000.00
Mt. Hood Ry. & Power Co. Street Repair fund		1,000.00
Bonded Indebtedness Sinking fund		824.74
Appropriation, Bonded Ind'bt. Sinking fund	986.00	
Appropriation, purchase of bonds		986.00
Police Relief fund		4,969.24
Appropriation, Police Relief fund	1,574.72	
Appropriation payment of sick benefits		1,574.72
Special tax fund 1916		2,303.21
General fund		555,233.27
Appropriation, General fund	122,576.42	
Appropriation, exp. furnish'g municipal jail bldg.		4,907.39
Appropriation, purchase of right-of-way		46.00
Appropriation, exp. repairing Maywood Drive		108.00
Appropriation, relief of unemployed		18,642.78
Appropriation, expense Mayor's office		13.96
Appropriation, expense Bureau of Fire		24,328.84
Appropriation, expense Bureau of Police		2,086.01
Appropriation, expense Bureau of Health		1,703.16
Appropriation, expense Municipal Court		71.50
Appropriation, Bureau of Pound		21.00
Appropriation, expense Com. of Public Affairs		40.00
Appropriation, expense office of City Attorney		1,302.61
Appropriation, expense Bureau of Parks		8,022.17
Appropriation, expense Bureau of City Hall		287.30
Appropriation, exp. Bu. Weights & Measures		86.00
Appropriation, expense free museum		191.50

TRIAL BALANCE—Continued

Appropriation, expense office City Treasurer....	$.....	$ 133.75
Appropriation, expense municipal garage.....	.....	210.60
Appropriation, expense public market	.....	52.50
Appropriation, exp. Bu. Purchases & Stores.....	.....	19.69
Appropriation, stationery stock.....	.....	6,040.25
Appropriation, rotary shop expense.....	.....	4,741.06
Appropriation, expense lighting streets and public buildings	.....	17,000.00
Appropriation, exp. Bureau Garbage Disposal ...	.....	5.50
Appropriation, expense Bureau Street Cleaning..	.....	1,669.98
Appropriation, expense Dept. Public Works.....	.....	16,306.55
Appropriation, expense Dept. of Auditing.....	.....	673.41
Appropriation, expense Civil Service Board.....	.....	51.96
Appropriation, expense advertising.....	.....	50.00
Appropriation, expense Crematory bonds.....	.....	200.00
Appropriation, expense repairing retaining wall, Montgomery Drive	.....	585.66
Appropriation, payment prior year claims.....	.....	162.00
Appropriation, refund vehicle licenses.....	.....	148.90
Appropriation, salary of secretary of Board of Motion Picture Censors	.....	6.25
Appropriation, refund of taxes, Sylvan.....	.....	876.96
Appropriation, payment claims town of Linnton.	.....	142.08
Appropriation, payment of claims of City of St. Johns	.....	4,547.07
Appropriation, purchase of property	.....	590.03
Appropriation, construction sewer E. 31st St....	.....	1,504.00
Appropriation, expense municipal lodging house.	.....	5,000.00
Bonded Indebtedness Interest fund.....	.....	105,193.65
Appropriation, Bonded Indebtedness Int. fund...	12,725.00	.....
Appropriation, payment of interest.....	.....	12,725.00
Chemical National Bank, New York.....	.....	4,475.00
Harris, Forbes & Co., New York.....	.....	300.00
Hanover National Bank, New York.....	.....	180.00
Sinking fund	.....	29,698.86
Appropriation, Sinking fund	28,612.51	.....
Appropriation, purchase of securities	.....	28,612.51
Special Bridge fund	.....	21,923.70
Appropriation, Special Bridge fund	20,399.53	.....
Appropriation, cost of fills and const. bridges...	.....	20,399.53
Water fund	.....	136,175.68
Appropriation, Water fund	19,050.70	.....
Appropriation, expense Bureau Water Works....	.....	14,500.26
Appropriation, payment interest on Water bonds	.....	4,502.50
Appropriation, Payment of claims former town of Linnton	.....	47.94
Chase National Bank, New York.....	.....	90.00
Harris, Forbes & Co., New York.....	.....	270.00
National Park Bank, New York.....	.....	797.50
Water Bond Sinking fund	.....	201,020.87
Appropriation, Water Bond Sinking fund.....	10,150.87	.....
Appropriation, purchase of securities	.....	10,150.87
Redemption fund	.....	1,001.19
Appropriation, Redemption fund	9,674.70	.....
Appropriation, redemption of certificates.....	.....	9,674.70
Bill Posting Badge fund	.....	241.00
Street Improvement fund	.....	28,420.30
Sewer funds	.....	12,202.68
Stark Street Extension fund	.....	500.00
Street Extension fund	.....	14,783.20
Water Main funds	.....	4,838.98
Street and Sewer Interest funds.....	.....	889.04
Improvement Bond Sinking fund	.....	200,382.06
Improvement Bond Interest fund	.....	9,753.58
National Park Bank, New York.....	.....	2,367.28
Street Extension Bond Sinking Fund.....	.....	1,308.78
Street Extension Bond Interest fund.....	.....	24.08
Public Auditorium fund.....	.....	14,673.07
Appropriation, Public Auditorium fund.....	7,818.67	.....
Appropriation, construction Pub. Auditorium....	.....	7,818.67

TRIAL BALANCE—Continued

Franchises	$.....	$ 903.40
Franchise, City Messenger & Delivery Co.	800.00	.....
Franchise, Heights Trust Co.	30.00	.....
Franchise, Errol Heights Railway Co.	73.40	.....
Wm. Adams, city treas., security account	2,775,766.74	.....
Bank of California	.....	550,000.00
Geo. W. Bates & Co., bankers	.....	7,000.00
Citizens bank	.....	50,000.00
First National bank	.....	456,286.51
Hibernia Savings bank	.....	57,000.00
Ladd & Tilton bank	.....	343,000.00
Lumbermen's National bank	.....	281,500.00
Montavilla Savings bank	.....	10,000.00
Northwestern National bank	.....	365,900.00
Scandinavian American bank	.....	50,000.00
United States National bank	.....	563,000.00
Bank of Sellwood	.....	10,000.00
Northwestern Electric Co.	.....	2,000.00
Peninsula National bank, St. Johns	.....	10,000.00
First Trust & Savings bank, St. Johns	.....	15,080.23
First National Bank of Linnton	.....	5,000.00
Improvement Bond Sinking fund, St. Johns	.....	9,988.60
Improvement Bond Interest fund, St. Johns	.....	987.15
Improvement Bond Sinking fund, Linnton	.....	6.57
	$36,462,146.86	$36,462,146.86

DEPARTMENT OF PUBLIC SAFETY

Code Designation		Mayor's Office	Bureau of Fire	Municipal Court	Bureau of Police	Bureau of Health	Pound	Public Defender	Bd. Motion Picture Censors
A	**Personal Service**								
1	Salaries	$ 9,969.00	$ 488,415.80	5,940.00	363,927.51	41,618.99	4,838.64	1,325.80	749.00
2	Special Services		13.75	756 50	15.00				
B	**Supplies**								
1	Office	80 83	536.04	178.15	1,340.11	885.30	4.66		154.68
2	Fuel		12,544.75		1,679.00	150.00			
3	Forage and Veterinary		12,703.12				603.90		
4	Food Supplies				3,512.33	1,016.51			
5	Cleaning and Disinfecting		1,400.48		663.31	750.29	42.27		
6	Motor Vehicle	130.36	2,351.96		2,404.70	967.44			
7	Botanical and Agricultural		13.50						
8	Educational and Recreational					149.43			
9	Medical and Surgical					1,738.52			
10	General Plant		2,007.83		515.18	349.85	2.80		
C	**Material**								
1	Highway								
2	Sewer								
3	Building	1,876.86		240.72	32.95				
4	General Plant		2,264.24		288.81	56.58	12.94		
D	**Equipment**								
1	Office	57.05	57.55	125.38	99.73	69.85		182.23	11.80
2	Household		970.71		34.90	224.10			
3	Livestock				225.00				
4	Motorless Vehicles and Equipment		26.41		27.45		16.50		
5	Motor Vehicles and Equipment	7.29	15.788.40		590.90	19.18			
7	Tolls		166.10		36.85				
8	General Plant		12,084.37		302.64	749.83	4.75		
E	**Contract and Open Order Service**								
1	Construction and Extension		28.00		802.75	91.75			
	Repairs								
2	General		15,908.38		149.90	3.50	57.74		5.00
3	Motor Vehicle	31.20	5,300.59		1,759.06	1,520.22			
4	**Light, Heat and Power**								
4a&b	Light								
4c	Power		52.00				5.92		
4d	Heat					15.66			
5	Janitorial Service		975.00	24.00	196.27	170.93			

Code Designation		Mayor's Office	Bureau of Fire	Municipal Court	Bureau of Police	Bureau of Health	Pound	Public Defender	Bd. Motion Picture Censors
6	**Transportation**								
6a	Hire of Horses and Vehicles					649.90			
6b	Hire of Automobiles								
6c	Storage of Motor Vehicles								
6d	Shoeing and Boarding of Horses, including Veterinary	4,654.76		3,217.11		105.50			
6e	Car fare		2.00			617.50	30.00		5.00
6f	Other Transportation		880.60		3.00	427.71			
7	**Communication**								
7a	Telephone		91.60		1,248.95				
7b	Telegraph Cable and Messenger Serv				140 16				
8	General Plant Service				24 00	2,498 34			
F	Contingencies	25.45	1,042 53		1,387 15	85.81	1.50		
G	**Fixed Charges and Contributions**								
2	Rent		*588.00						
4	Insurance								
5	Advertising								
6	Other Fixed Charges								
7	Other Contributions		1,230.00	175.00					
H	**Purchase of Real Estate Special Appropriations**								
	Traveling Expenses of Fire Marshal		100 00						
	Rent of Fire Hydrants, St. Johns		392.00						
	Total Claims Paid	$10,301.18	583,291.33	7,199.03	384,832.49	54,860.14	5,727.12	1,508.03	925.48
	Warrants drawn	10,174.88	564,736.60	7,027.38	382,772.08	52,417.52	5,567.73	1,508.03	765.80
	Add Miscellaneous Debits	126.80	30,015.15	171.65	2,416.94	2,713.46	159.39		159.68
	Deduct Miscellaneous Credits	.50	11,460.42		356.53	270.84			
	Total Expenditures	10,301.18	583,291.33	7,199.03	384,832.49	54,860.14	5,727.12	1,508.03	925.48
	Claims Outstanding	13.96	24,078.84	71.50	1,506.86	1,703.16	21.00		6.25
	Total Encumberance	$10,315.14	607,370.17	7,270.53	386,339.35	56,563.30	5,748.12	1,508.03	931.73
	Total Appropriation	10,423.00	708,518.03	8,207.00	447,407.67	60,640.00	7,348.00	1,510.80	1,007.25
	Balance of Appropriation canceled	107.86	100,897.86	936.47	60,489.17	4,076.70	1,599.88	2.77	75.52
	Balance of Appropriatoin carried forward		250.00		579.15				

*Deduct.

DEPARTMENT OF PUBLIC AFFAIRS

Code Designation		Office of Commissioner	Bureau of Parks	Office City Attorney	Bureau of City Hall	Bureau of Weights and Measures	Bureau of Free Employment	Municipal Reference Library	Free Museum
A	**Personal Service**								
1	Salaries	$7,600.87	110,785.15	21,333.67	13,660.63	3,000.00	2,369.53		
2	Special Services				80.92				
B	**Supplies**								
1	Office	127.76	475.06	468.93	12.36	32.03	61.57		
2	Fuel		320.06		1,697.59		28.05		
3	Forage and Veterinary		4,489.12						
4	Food Supplies								
5	Cleaning and Disinfecting		1,580.89		393.92				
6	Motor Vehicle		250.24			36.48			
7	Botanical and Agricultural		2,585.26						
8	Educational and Recreational		1,024.17						
9	Medical and Surgical		40.89						
10	General Plant		1,457.76		327.81				
C	**Material**								
1	Highway		5,705.03						
2	Sewer		72.18						
3	Building		1,370.37		80.22				
4	General Plant		12,421.95		14.29				
D	**Equipment**								
1	Office		214.68	586.79		4.25	27.80	37.20	
2	Household		2.38		48.48				
3	Livestock		23.66			*225.00			
4	Motorless Vehicles and Equipment		10.42						
5	Motor Vehicles and Equipment		549.71			507.10			
6	Educational and Recreational		1,704.36						
7	Tools		172.40		1.85	3.53			
8	General Plant		2,858.19		5.57	91.70			
E	**Contract and Open Order Service**								
1	Construction and Extension		9,549.96		564.66				
E	**Repairs**								
2	General		2,735.59		344.80	1.15			
3	Motor Vehicles		117.14			35.07			
	Light, Heat and Power								
4c	Power								
4d	Heat		415.95		113.05				
5	Janitorial Service		2,623.31		482.97		4.50		

Code Designation		Office of Commissioner	Bureau of Parks	Office of City Attorney	Bureau of City Hall	Bureau of Weights and Measures	Bureau of Free Employment	Municipal Reference Library	Free Museum
	Transportation								
6a	Hire of Horses		1,865.00						
6b	Hire of Automobiles		11.05						
6c	Storage of Motor Vehicles								
6d	Shoeing and Boarding of Horses, including Veterinary		122.75						
6e	Car fare		319.00			40.00			
6f	Other Transportation		177.25	50.60	3.07		16.66		
	Communication								
7a	Telephone		182.10	3.45	1,076.40		96.75		
7b	Telegraph		8.88	6.20					
8	General Plant Service		11,188.46	1,695.98	489.57				
F	Contingencies	7.50	5,940.19	130.95		15.50		2.79	307.70
G	**Fixed Charges and Contributions**								
2	Rent		197.85				1,365.00		
5	Advertising		2.81						
6	Other Fixed Charges		14.00						
	Special Appropriations								
	Judgments			2,171.58					
	Department of Public Affairs, Unemployed Appropriation		1,996.93						
	Total Claims Paid	$7,736.13	185,582.15	26,448.15	19,398.16	3,541.81	3,969.86	39.99	307.70
	*Deduct....								
	Warrants Drawn	7,610.05	183,009.55	26,018.69	19,358.10	3,747.03	3,876.33	39.99	307.70
	Add Miscellaneous Debits	127.34	4,017.26	474.07	40.06	69.78	93.53		
	Deduct Miscellaneous Credits	1.26	1,444.66	44.61		275.00			
	Total Expenditures	7,736.13	185,582.15	26,448.15	19,398.16	3,541.81	3,969.86	39.99	307.70
	Claims Outstanding	40.00	7,222.17	1,302.61	287.30	86.00			191.50
	Total Encumbrance	7,776.13	192,804.32	27,750.76	19,685.46	3,627.81	3,969.86	39.99	499.20
	Total Appropriation	7,830.00	194,470.97	28,859.86	20,209.50	4,175.00	4,105.00	40.00	500.00
	Balance of Appropriation Canceled	53.87	866.65	1,109.10	524.04	547.19	135.14	.01	.80
	Balance of Appropriation carried forward		800.00						

*Credit.

Code Designation		Office of Commissioner	Bureau of Licenses	Office of Treasurer	Municipal Garage	Public Market	Bureau of Purchases	City Store House	Municipal Shop Equipment
A	**Personal Service**								
1	Salaries	6,017.05	.....	16,606.95	3,417.57	2,076.00	9,775.55	1,062.50	.....
B	**Supplies**								
1	Office	38.88	47.30	4,816.96	42.50	80.37	395.15	.....	.....
2	Fuel	.....	.....	.....	115.85	.....	.....	.....	.....
5	Cleaning and Disinfecting	.....	.....	.....	51.28	.....	.....	.....	.....
6	Motor Vehicle	.....	.....	.....	1,994.79	.....	.....	.....	.....
10	General Plant	.....	.....	7.20	68.79	8.67	.....	.....	.....
C	**Material**								
3	Building	.....	.....	.....	4.12	.....	.....	.....	.....
4	General Plant	.....	.....	.....	30.37	.....	.....	.....	.....
D	**Equipment**								
1	Office	.....	.....	119.22	.....	.....	49.85	16.25	.....
7	Tools	.....	.....	.....	24.81	.....	.....	.....	.....
8	General Plant	.....	.....	.....	375.95	47.00	.....	.....	963.23
E	**Contract and Open Order Service**								
1	Construction and Extension	.....	.....	.....	50.00	3,114.72	.....	.....	.....
	Repairs								
2	General	.....	.....	78.29	.....	29.25	.....	.....	.....
	Light, Heat and Power								
4c	Power	.....	.....	.....	53.53	.....	.....	.....	.....
4d	Heat	.....	.....	.....	26.87	.....	.....	.....	.....
5	Janitorial Service	.....	.....	.....	.....	70.25	.....	.....	.....
	Communication								
7a	Telephone	.....	.....	.....	96.00	.....	.....	.....	.....
F	Contingencies	15.83	.....	134.47	11.45	151.06	12.87	48.01	.....
G	**Fixed Charges and Contributions**								
2	Rent	.....	.....	205.00	420.70	.....	.....	60.00	.....
	Total Claims Paid	$6,071.76	47.30	21,968.09	6,784.58	5,577.32	10,233.42	1,186.76	963.23
	Warrants Drawn	6,032.88	.....	21,328.35	6,579.22	5,483.17	9,867.00	1,141.54	956.47
	Add Miscellaneous Debits	38.88	47.30	684.26	795.60	94.15	476.92	45.22	6.76
	Deduct Miscellaneous Credits	.....	.....	44.52	590.24	.....	110.50	.....	.....
	Total Expenditures	6,071.76	47.30	21,968.09	6,784.58	5,577.32	10,233.42	1,186.76	963.23
	Claims Outstanding	.....	.....	133.75	210.60	52.50	19.69	.....	.....
	Total Encumbrance	6,071.76	47.30	22,101.84	6,995.18	5,629.82	10,253.11	1,186.76	963.23
	Total Appropriation	6,270.00	50.00	22,327.00	8,659.60	6,060.10	10,519.75	1,372.50	1,000.00
	Balance of Appropriation Canceled	$198.24	2.70	225.16	1,664.42	430.28	266.64	185.74	36.77

Code Designation		Department Public Works	Permanent Works	Weeds and Brush Nuisance	Peninsula District Sewer Survey	Repairs Patton Road Sewer	Repairs to Retaining Wall.	Repairs to Montgomery Drive Retaining Wall	Repairs to Maywood Drive	Repairs to Grand Avenue Bridge
A	**Personal Service**									
1	Salaries	$274,526.41	13,139.53	1,936.47	3,117.00	288.51		544.38	30.00	477.21
2	Special Services	24.25								
B	**Supplies**									
1	Office	3,389.79		14.38						
2	Fuel	1,817.92								
3	Forage and Veterinary	22.72								
4	Food	2.20								
5	Cleaning and Disinfecting									
6	Motor Vehicle	884.03								
10	General Plant	1,956.85	54.49		72.00					
C	**Material**									
1	Highway	14,253.54	798.34							5.72
2	Sewer	4,836.97	599.89			270.45				
3	Building	349.11								
4	General Plant	2,593.34	130.40	1.96	7.93		32.48	69.96		
D	**Equipment**									
1	Office	612.36								
4	Motorless Vehicles and Equipment	8.82								
5	Motor Vehicles and Equipment	1,446.91								
7	Tools	324.34	9.70							
8	General Plant	6,754.47	4.65		4.37					50.90
E	**Contract and Open Order Service**									
1	Construction and Extension (See permanent works)		41.94						2,715.76	418.77
	Repairs									
2	Street Maintenance	9,627.50								
	General	4,660.43	3,016.96		5.00					8,371.80
3	Motor Vehicles	1,886.91								
	Light, Heat and Power									
4c	Power	41.12								
E	**Transportation**									
6a	Hire of Horses	5,688.13	44.75							
6b	Hire of Automobiles	*6.87								
6c	Storage of Motor Vehicles	27.50								
6d	Shoeing and Boarding of Horses, including Veterinary	4.00								
6e	Car Fare	2,610.90	98.55	48.00	145.95				1.00	6.90
6f	Other Transportation	156.85								

*Deduct.

DEPARTMENT OF PUBLIC WORKS—Continued

Code Designation		Department Public Works	Permanent Works	Weeds and Brush Nuisance	Peninsula District Sewer Survey	Repairs Patton Road Sewer	Repairs to Retaining Wall.	Repairs toMontgomery Drive Retaining Wall	Repairs to Maywood Drive	Repairs to Grand Avenue Bridge
	Communication									
7a	Telephone	1.20								
7b	Telegraph	10.06								
8	General Plant Service								1.10	
F	Contingencies	379.13	15.72	20.00						
G	**Fixed Charges and Contributions**									
2	Rent	338.75								
6	Other Fixed Charges	49.50								
	Total Claims Paid	$339,279.14	17,954.92	2,020.81	3,352.25	558.96	32.48	614.34	2,747.86	9,331.30
	Warrants Drawn	338,129.92	17,827.71	1,958.43	3,260.01	558.96	32.48	614.34	2,745.76	9,266.15
	Add Miscellaneous Debits	10,864.55	154.47	62.38	96.74				2.10	65.15
	Deduct Miscellaneous Credits	9,715.33	27.26		4.50					
	Total Expenditures	$339,279.14	17,954.92	2,020.81	3,352.25	558.96	32.48	614.34	2,747.86	9,331.30
	Claims Outstanding	10,952.54	2,263.82		49.75			20.00	108.00	
	Total Encumbrance	$350,231.68	20,218.74	2,020.81	3,402.00	558.96	32.48	634.34	2,855.86	9,331.30
	Total Appropriation	382,587.25	21,200.00	2,852.38	4,018.02	558.96	1,153.00	1,200.00	3,179.59	10,802.24
	Bal. of Appropriation Canceled	$32,355.57	981.26	831.57			1,120.52		323.73	1,470.94
	Bal. of Appropriation carried forward				616.02			565.66		

*Deduct.

DEPARTMENT OF PUBLIC WORKS—Continued

Code Designation		Repairs to to First St. Bridge	Repairs Union Av Bridge	Repairs Front St. Bridge	Obstructions to Navigation	Repairs to Pavement Broadway Bridge	Expense Morrison Street Bridge	Repairs to Bridges	Refilling E. Alder Street Sewer	East 31st Street Sewer	Additional Booths Public Mark'ts
A	**Personal Service**										
1	Salaries	$ 211.06	56.38	238.57	154.95		68.58				
2	Special Services										
B	**Supplies**										
1	Office										
2	Fuel										
3	Forage and Veterinary										
4	Food										
5	Cleaning and Disinfecting										
6	Motor Vehicle										
10	General Plant										
C	**Material**										
1	Highway	391.43				*.40					
2	Sewer										
3	Building										
4	General Plant			86.93							
D	**Equipment**										
1	Office										
4	Motorless Vehicle and Equipment										
5	Motor Vehicles and Equipment										
7	Tools										
8	General Plant										
E	**Contract, Open OrderService**										
1	Construction and Extension		809.28								
	Repairs										
2	Street Maintenance										
	General		*211.35				693.60	1,424.16			
3	Motor Vehicles										
	Light, Heat and Power										
4c	Power										
E	**Transportation**										
6a	Hire of horses										
6b	Hire of Automobiles										
6c	Storage of Motor Vehicles										
6d	Shoeing and Boarding of Horses, including Veterinary										
6e	Car Fare		3.00								
6f	Other Transportation										

*Deduct.

DEPARTMENT OF PUBLIC WORKS—Continued

Code Designation		Repairs to First St. Bridge	Repairs Union Av Bridge	Repairs Front St. Bridge	Obstructions to Navigation	Repairs to Pavement Broadway Bridge	Expense Morrison Street Bridge	Repairs to Bridges	Refilling E. Alder Street Sewer	East 31st Street Sewer	Additional Booths Public Mark'ts
	Communication										
7a	Telephone										
7b	Telegraph										
8	General Plant Service	4.00			3,002.73						
F	Contingencies										
G	**Fixed Charges Contributions**										
2	Rent										
6	Other Fixed Charges										
	Total Claims Paid	$ 606.49	657.31	325.50	3,157.68	*.40	762.18	1,424.16			
	Warrants Drawn	606.49	865.66	325.50	3,154.95		717.60	1,424.16			
	Add Miscellaneous Debits		3.00		2.73		44.58				
	Deduct Miscellaneous Credits		211.35			.40					
	Total Expenditures	606.49	657.31	325.50	3,157.68	*.40	762.18	1,424.16			
	Claims Outstanding									1,349.70	
	Total Encumbrance	606.49	657.31	325.50	3,157.68	*.40	762.18	1,424.16		1,349.70	
	Total Appropriation	1,100.00	1,712.21	543.64	4,971.56	1,224.02	821.37	1,424.16	1,200.00	1,504.00	102.18
	Bal. of Appropriation Canceled	493.51	1,054.90	218.14	1,813.88		59.19				102.18
	Bal. of Appropriation Carried Frd					1,224.42			1,200.00	154.30	

*Deduct.

DEPARTMENT OF AUDITING

Code Designation		
A	**Personal Service**	
1	Salaries	$ 41,796.63
2	Special Services	1,381.73
B	**Supplies**	
1	Office	2,918.45
10	General Plant (License tags*)	113.00
D	**Equipment**	
1	Office	312.89
E	**Contract and Open Order Service Repairs**	
2	General	41.34
F	Contingencies	139.50
	Total Claims Paid	$ 46,703.54
	Warrants Drawn	44,795.54
	Add Miscellaneous Debits	3,223.66
	Deduct Miscellaneous Credits	1,315.66
	Total Expenditures	$ 46,703.54
	Claims Outstanding	673.41
	Total Encumbrance	47,376.95
	Total Appropriation	47,997.31
	Balance of Appropriation Canceled	$620.36

CIVIL SERVICE BOARD

Code Designation		
A	**Personal Service**	
1	Salaries	$ 3,704.52
B	**Supplies**	
1	Office	247.74
D	**Equipment**	
1	Office	70.00
F	Contingencies	84.48
G	**Fixed Charges and Contributions**	
2	Advertising	42.66
	Special Appropriations	
	Litigation expense	102.07
	Total Claims Paid	$ 4,251.47
	Warrants Drawn	3,996.66
	Add Miscellaneous Debits	254.81
	Deduct Miscellaneous Credits	.....
	Total Expenditures	$ 4,251.47
	Claims Outstanding	51.96
	Total Encumbrance	4,303.43
	Total Appropriation	4,760.00
	Balance of Appropriation Canceled	456.57

Code Designation		Office of Commissioner	Motor Bus Inspection	Lighting	Bureau of Street Cleaning	Bureau of Garbage Disposal
A	**Personal Service**					
1	Salaries	$ 9,599.80	$ 326.67	131.66	218,027.69	20,331.50
B	**Supplies**					
1	Office	135.17	34.58	5.92	121.66	6.96
2	Fuel				528.49	
3	Forage and Veterinary				21,284.29	132.25
5	Cleaning and Disinfecting				170.80	
6	Motor Vehicle				2,178.89	
10	General Plant			122.24	3,961.33	82.16
C	**Material**					
1	Highway				6,162.31	35.33
3	Building				83.28	27.26
4	General Plant			12.88	4,869.39	364.05
D	**Equipment**					
1	Office				63.23	
2	Household				69.55	
3	Live Stock				1,175.00	
4	Motorless Vehicles and Equipment				2,154.22	64.72
5	Motor Vehicles and Equipment				62.22	
7	Tools				297.06	75.48
8	General Plant				265.22	7.17
E	**Contract and Open Order Service**					
1	Construction and Extension				44,299.59	
	Repairs					
2	General				1,536.66	85.84
3	Motor Vehicle				1,601.99	
	Light, Heat and Power					
4a-4b	Lighting Streets and Public Buildings			173,761.25		
4c	Power				10.15	60.50
4d	Heat					
5	Janitorial Service				105.02	
	Transportation					
6b	Hire of Automobiles			108.64		2.50
6d	Shoeing and Boarding Horses, including Veterinary				330.40	8.05
6e	Car Fare				87.00	11.00
6f	Other Transportation					
E	**Communication**					
7a	Telephone				142.50	
8	General Plant Service					
F	Contingencies	14.75			220.73	16.50

DEPARTMENT OF PUBLIC UTILITIES—Continued

Code Designation		Office of Commissioner	Motor Bus Inspection	Lighting	Bureau of Street Cleaning	Bureau of Garbage Disposal
G	**Fixed Charges and Contributions**					
2	Rent				600.00	
	Relief of Unemployed				2,461.50	
	Total Claims Paid	$ 9,749.72	361.25	174,142.59	312,870.17	21,311.27
	Warrants Drawn	9,614.55	326.67	174,075.37	309,477.19	21,208.99
	Add Miscellaneous Debits	137.83	34.58	114.56	3,884.73	104.38
	Deduct Miscellaneous Credits	2.66		47.34	491.75	2.10
	Total Expenditures	$ 9,749.72	361.25	174,142.59	312,870.17	21,311.27
	Claims Outstanding			17,000.00	1,669.98	5.50
	Total Encumberance	9,749.72	361.25	191,142.59	314,540.15	21,316.77
	Total Appropriation	14,805.00	950.00	196,500.00	336,725.96	25,535.25
	Balance of Appropriation Canceled	$ 5,055.28	588.75	5,357.41	22,185.81	4,218.48

SPECIAL APPROPRIATIONS AND EXPENDITURES FOR YEAR 1915

	Claims Paid	Warrants Drawn	Miscellaneous Debits	Miscellaneous Credits	Total Expenditures	Claims Outstanding	Total Encumbrance	Total Appropriation	Bal. of Appropriation Canceled	Bal. of Appropriation Carried Forward
Advertising expense, Recall Election R. G. Dieck	263.25	263.25			263.25		263.25	263.25		
Annual audit of financial books	1,750.00	1,750.00			1,750.00		1,750.00	1,750.00		
Assessment against City property	2,308.56	2,308.56			2,308.56		2,308.56	3,000.00	691.44	
Advertising	9,467.95	9,467.95			9,467.95	50.00	9,517.95	10,000.00	482.05	
Crematory bonds expense								200.00		200.00
Emergency Fund of the Council	*4,006.55	4,906.55		900.00	4,006.55		4,006.55	5,000.00	993.45	
Election—General Municipal	19,546.13	17,247.39	2,300.74	2.00	19,546.13		19,546.13	25,000.00	5,453.87	
Extension of Mill Street	814.50	814.50			814.50		814.50	814.50		
Furnishing Municipal Jail	5,544.16	5,479.81	64.35		5,544.16	4,872.63	10,416.79	10,451.55		34.76
Claims paid for Town of Linnton	1,280.85	1,079.45	201.40		1,280.85		1,280.85	1,422.93		142.08
Liberty Bell expense	573.97	558.97	15.00		573.97		573.97	625.00	51.03	
Miscellaneous expense	218.50	218.50			218.50		218.50	218.50		
Municipal Lodging House						564.13	564.13	5,000.00		4,435.87
Payment of prior year claims	542.13	632.13		90.00	542.13	162.00	704.13	794.13	90.00	
Premium on employes' bonds	1,498.23	1,498.23			1,498.23		1,498.23	1,800.00	301.77	
Premium on fire insurance	1,330.90	2,047.97		717.07	1,330 90		1,330.90	1,750.00	419.10	
Pisgah Home Colony Association	1,650.00	1,650.00			1,650.00		1,650.00	1,650.00		
Purchase of right of way	287.50	287.50			287.50		287.50	287.50		
Relief of unemployed	49,044.67	49,794.89	375.83	1,126.05	49,044.67	17,371.30	66,415.97	67,687.45		1,271.48
Relief of certain persons	2,264.53	2,264.53			2,264.53		2,264.53	5,189.82	2,925.29	
Relief of Mrs. J. F. Kraig	240.00	240.00			240.00		240.00	240.00		
Rent of New Railroad Bridge	7,400.00	7,400.00			7,400.00		7,400.00	7,400.00		
Refund of vehicle licenses	451.10	451.10			451.10		451.10	600.00		148.90
Refund of licenses	273.95	273.95			273.95		273.95	273.95		
Rose Festival expense	1,000.00	1,000.00			1,000.00		1,000.00	1,000.00		
Refund of taxes	823.04	823.04			823.04		823.04	1,700.00		876.96
Refund of assessments	1,691.70	1,709.70		18.00	1,691.70		1,691.70	1,691.70		
Claims paid for City of St. Johns	2,652.93	2,652.93			2,652.93		2,652.93	7,200.00		4,547.07
Salary of Assistant Inventory Clerk	116.25	116.25			116.25		116.25	150.00	33.75	
State Board of Pharmacy	200.00	200.00			200.00		200.00	200.00		
Pay of viewers	100.00	100.00			100.00		100.00	100.00		
Incidental expenses	425.00	425.00			425.00		425.00	425.00		
Purchase of Street and Sewer Warrants	5,637.48	5,637.48			5,637.48		5,637.48	5,637.48		
Purchase of property delinquent assessments	4.97	4.97			4.97		4.97	595.00		590.03
Interest on Crematory bonds	3,675.00		3,675.00		3,675.00		3,675.00	3,675.00		
Redemption of Crematory bonds	10,800.00		10,800.00		10,800.00		10,800.00	10,800.00		
Purchase of automobile								3,000.00	3,000.00	
	137,883.80	123,304.60	17,432.32	2,853.12	137,883.80	23,020.06	160,903.86	187,592.76	14,441.75	12,247.15

*See detailed statement of claims paid out of Emergency Fund of Council.

SPECIAL APPROPRIATIONS AND EXPENDITURES FOR YEAR 1915—Continued

	Claims Paid	Warrants Drawn	Miscellaneous Debits	Miscellaneous Credits	Total Expenditures	Claims Outstanding	Total Encumbrance	Total Appropriation	Bal. of Appropriation Canceled	Bal. of Appropriation Carried Forward
ROTARY ACCOUNTS										
Shop Rotary Account	$46,376.96	26,417.65	19,959.31	.....	46,376.96	2,068.50	48,445.46	51,118.02	.....	2,672.56
Stationery Rotary Account	24,092.65	24,058.32	34.33	.....	24,092.65	3,331.68	27,424.33	30,132.90	.....	2,708.57
	$70,469.61	50,475.97	19,993.64	.....	70,469.61	5,400.18	75,869.79	81,250.92	.....	5,381.13

SPECIAL APPROPRIATIONS AND EXPENDITURES FOR YEAR 1915—Continued

	Claims Paid	Warrants Drawn	Miscellaneous Debits	Miscellaneous Credits	Total Expenditures	Claims Outstanding	Total Encumbrance	Total Appropriation	Bal. of Appropriation Canceled	Bal. of Appropriation Carried Forward
STREET EXTENSION ACCOUNTS										
East Morrison Street extension	1,050.00	1,050.00	.....	.....	1,050.00	.....	1,050.00	1,050.00	.....	.....
Broadway widening	3,320.72	3,440.72	.....	120.00	3,320.72	.....	3,320.72	3,320.72	.....	.....
Benton Street extension	11,250.00	11,250.00	.....	.....	11,250.00	.....	11,250.00	11,250.00	.....	.....
Broadway extension	998.95	1,638.95	.....	640.00	998.95	.....	998.95	998.95	.....	.....
Powell Street widening	9,461.80	10,126.80	.....	665.00	9,461.80	.....	9,461.80	9,461.80	.....	.....
	$26,081.47	27,506.47	.....	1,425.00	26,081.47	.....	26,081.47	26,081.47	.....	.....

EMERGENCY FUND OF THE COUNCIL—EXPENDITURES FOR THE YEAR 1915

Mrs. Johanna Costello, Ordinance No. 29962—$25 per mo.	$ 300.00	$ 300.00
H. R. Albee, Ordinance No. 30184	650.00	.....
H. R. Albee, Ordinance No. 30508	600.00	.....
H. R. Albee, Ordinance No. 30896	400.00	.....
H. R. Albee, Ordinance No. 30143	250.00	.....
H. R. Albee, Ordinance No. 30170	40.00	1,940.00
C. A. Bigelow, Ordinance No. 30031	300.00	.....
C. A. Bigelow, Ordinance No. 30311	100.00	.....
C. A. Bigelow, Ordinance No. 30618	150.00	550.00
Dr. Marcellus, Spanish-American War Veterans	150.00	150.00
Louise MacDonald, Injury	150.00	150.00
Marshall-Wells Hardware Co.—Excess of $250—Charter limit	368.70	368.70
W. H. Murphy, Grand Army of the Republic	300.00	300.00
Otto Kleeman, Indian War Veterans	50.00	50.00
Thiel Detective Agency, Ordinance No. 30764	44.40	44.40
C. L. Keller, frame for Resolutoin No. 8720	3.45	3.45
E. W. Hankin, Injury—Ordinanace No. 30764	150.00	150.00
Total	$.....	$4,006.55
Amount appropriated	$5,000.00	$.....
Amount expended	.....	4,006.55
Appropriation cancelled	.....	993.45
Total	$5,000.00	$5,000.00

APPROPRIATIONS BROUGHT FORWARD AND WARRANTS DRAWN IN PAYMENT OF CLAIMS AUTHORIZED DURING 1914

Code Designation		Bureau of Fire	Municipal Court	Bureau of Police	Bureau of Health	Pound	Office of Treasurer	Municipal Garage	Public Market	Purchases & Stores	Office of Com. Public Affairs
A	**Personal Service**										
1	Salaries and Wages										
2	Fees and Special Services		45.00						252.20		
B	**Supplies**										
1	Office	112.00	31.49	32.50	30.00					22.89	3.34
2	Fuel	215.24		197.70							
3	Forage and Veterinary					4.52					
4	Food			1,137.78	68.66						
5	Cleaning and Disinfecting			45.39	93.48						
6	Motor Vehicle	131.10		394.67	69.89			162.79			
7	Botanical and Agricultural										
8	Educational and Recreational										
9	Medical and Surgical				370.12						
10	General Plant			4.91	57.97			1.72			
C	**Material**										
1	Highway										
2	Sewer										
3	Building	13.51		9.15	1.04						
4	General Plant	719.53									
D	**Equipment**										
1	Office			11.65						14.55	18.95
2	Household	15.55		.75							
3	Livestock										
4	Motorless Vehicles and Equipment										
5	Motor Vehicles and Equipment			705.98							
6	Educational and Recreational										
7	General Plant	2,744.57		1.70							
E	**Contract and Open Order Service**										
1	Construction and Extension										
	Repairs										
2	Maintenance										
2	General	$ 2,597.01									
3	Motor Vehicle	654.51		69.86	17.99						
	Light, Heat and Power										
4a-4b	Lighting Streets and Buildings	26.00						5.90			
4c	Power				2.55	.50		4.40			
4d	Heat										
5	Janitorial Service	95.00		36.94	.75				15.00		

APPROPRIATIONS BROUGHT FORWARD AND WARRANTS DRAWN IN PAYMENT OF CLAIMS AUTHORIZED DURING 1914—Continued

Code Designation		Bureau of Fire	Municipal Court	Bureau of Police	Bureau of Health	Pound	Office of Treasurer	Municipal Garage	Public Market	Purchases & Stores	Office of Com. Public Affairs
	Transportation										
6a	Hire of Horses and Vehicles				80.00						
6b	Hire of Automobiles										
6c	Storage of Motor Vehicles										
6d	Shoeing and Boarding of Horses, including Veterinary			284.00		13.25					
6e	Car Fare										
6f	Other Transportation				19.10						
	Communication										
7a	Telephone			4.00				8.00	6.15		
7b	Telegraph, Cable and Messenger Service			14.63							
8	General Plant Service			2.00	394.00				3.50		
F	Contingencies			119.90							
G	**Fixed Charges and Contributions**										
2	Rent						6.00				
4	Insurance										
5	Advertising	3.16									
6	Other Fixed Charges										
7	Other Contributions										
	Total Claims Paid	$7,327.18	76.49	3,073.51	1,205.55	18.27	6.00	182.81	276 85	37 44	22 29
	Warrants Drawn	$ 5,108 24	45 00	3,076.94	1,205.55	18.27	6.00	182.81	276.85	14.55	18.95
	Add Miscellaneous Debits	2,218.94	31.49	32.50						22.89	3.34
	Deduct Miscellaneous Credits			35.93							
	Total Expenditures	7,327.18	76.49	3,073.51	1,205.55	18.27	6.00	182.81	276.85	37.44	22.29
	Claims Outstanding										
	Total Encumbrance	$ 7,327.18	76.49	3,073.51	1,205.55	18.27	6.00	182.81	276.85	37.44	22.29
	Total Appropriation	82,302.63	957.39	44,787.70	1,794.92	1,460.30	6.00	721.87	276.85	464.10	247.87
	Bal. of Appropriation Canceled	$ 74,975.45	880.90	41,714.19	589.37	1.442.03		539.06		426.66	225.58

APPROPRIATIONS BROUGHT FORWARD AND WARRANTS DRAWN IN PAYMENT OF CLAIMS AUTHORIZED DURING 1914—Continued

Code Designation		Bureau of Parks	Office of City Attorney	Bureau of City Hall	Weights and Measures	Bureau of Free Employment	Lighting	Bureau of Street Cleaning	Bureau of Garbage Disposal	Office of Auditor
A	**Personal Service**									
1	Salaries and Wages									
2	Fees and Special Services		210.50							
B	**Supplies**									
1	Office		25.99		12.35					927.47
2	Fuel	76.85		185.03						
3	Forage and Veterinary	419.29						2,552.84		
4	Food									
5	Cleaning and Disinfecting	107.38								
6	Motor Vehicle							91.40		
7	Botanical and Agricultural	406 14								
8	Educational and Recreational	13.34								
9	Medical and Surgical									
10	General Plant	67.88		18.04				503.83		
C	**Material**									
1	Highway	75.32								
2	Sewer									
3	Building	73.24								
4	General Plant	715.56						.47	92.04	
D	**Equipment**									
1	Office		17.00							
2	Household			4.86						
3	Livestock									
4	Motorless Vehicles and Equipment									
5	Motor Vehicles and Equipment							850.00		
6	Educational and Recreational	15.94								
7	General Plant	215.07		77.66				7.74		
E	**Contract and Open Order Service**									
1	Construction and Extension	90.00		960.00						
	Repairs									
2	Maintenance									
2	General	418.00	39.00				30.05	103.90	26.68	
3	Motor Vehicles	137.23						1.25		
	Light, Heat and Power									
4a-4b	Lighting Streets and Buildings						15,358.58			
4c	Power			8.74					5.50	
4d	Heat									
5	Janitorial Service	79.26		41.72						

APPROPRIATIONS BROUGHT FORWARD AND WARRANTS DRAWN IN PAYMENT OF CLAIMS AUTHORIZED DURING 1914—Continued

Code Designation		Bureau of Parks	Office of City Attorney	Bureau of City Hall	Weights and Measures	Bureau of Free Employment	Lighting	Bureau of Street Cleaning	Bureau of Garbage Disposal	Office of Auditor
	Transportation									
6a	Hire of Horses and Vehicles	.....	.....	1.00	.....	.....	.....	.....	.....	.....
6b	Hire of Automobiles	.....	.....	.....	.....	.....	34.75	.....	.....	.....
6c	Storage of Motor Vehicles	.....	.....	.....	.....	.....	.....	.....	.....	.....
6d	Shoeing and Boarding of Horses, including Veterinary	3.00	.....	.....	29.50	.....	.....	30.00	.....	.....
6e	Car Fare	.....	.....	.....	.....	.....	.....	.....	.....	.....
6f	Other Transportation	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Communication									
7a	Telephone	.....	.....	1.00	.....	8.50	.....	11.00	.....	.....
7b	Telegraph, Cable and Messenger Service	.....	.....	.....	.....	.....	.....	.....	.....	.....
8	General Plant Service	329.13	33.05	18.50	.....	.....	.....	.....	.....	.....
F	Contingencies	.....	.....	.....	.....	.....	.....	.....	.....	.....
G	**Fixed Charges and Contributions**									
2	Rent	5.00	.....	.....	.....	.....	.....	.....	.....	.....
4	Insurance	.....	.....	.....	.....	.....	.....	.....	.....	.....
5	Advertising	.....	.....	.....	.....	30.00	.....	.....	.....	1,002.90
6	Other Fixed Charges	.....	.....	.....	.....	.....	.....	.....	.....	.....
7	Other Contributions	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Total Claims Paid	$ 3,247.63	286.54	1,355.55	41.85	38.50	15,423.38	4,152.43	124.22	1,930.37
	Warrants Drawn	$ 3,130.95	260.55	1,355.55	29.50	38.50	15,388.63	4,152.43	124.22	1,789.62
	Add Miscellaneous Debits	116.68	25.99	.....	12.35	.....	34.75	.....	.....	140.75
	Deduct Miscellaneous Credits	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Total Expenditures	3,247.63	286.54	1,355.55	41.85	38.50	15,423.38	4,152.43	124.22	1,930.37
	Claims Outstandig	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Total Expenditures	$ 3,247.63	286.54	1,355.55	41.85	38.50	15,423.38	4,152.43	124.22	1,930.37
	Total Appropteation	5,201.24	2,900.90	3,256.98	112.87	814.90	26,875.89	34,901.01	3,962.39	6,937.55
	Balance of Appropriation Canceled	$ 1,953.61	2,614.36	1,901.43	71.02	776.40	11,452.51	30,748.58	3,838.17	5,007.18

SPECIAL APPROPRIATIONS BROUGHT FORWARD AND WARRANTS DRAWN IN PAYMENT OF CLAIMS AUTHORIZED DURING 1914

	Claims Paid	Warrants Drawn	Miscellaneous Debits	Miscellaneous Credits	Total Expenditures	Claims Outstanding	Total Encumbrance	Total Appropriation	Balance of Appropriation Canceled	Balance of Appropriation Carried Forward
Recall Election	$ 1,057.12	1,053.40	3.72	.....	1,057.12	.....	1,057.12	8,161.30	7,104.18	.....
Rent of New Railroad Bridge	4,774.19	4,774.19	.....	.....	4,774.19	.....	4,774.19	4,774.19	.....	.....
Purchase of right of way	.....	.....	.....	.....	.....	4.00	4.00	46.00	.....	42.00
Market Sheds construction	5,727.04	5,713.60	13.44	.....	5,727.04	.....	5,727.04	5,727.04	.....	.....
Manufacturers' and Land Products Show	20.11	9.50	10.61	.....	20.11	.....	20.11	78.15	58.04	.....
	$ 11,578.46	11,550.69	27.77		11,578.46	4.00	11,582.46	18,786.68	7.162.22	42.00

APPROPRIATONS BROUGHT FORWARD AND WARRANTS DRAWN IN PAYMENT OF CLAIMS AUTHORIZED DURING 1914—DEPARTMENT OF PUBLIC WORKS

Code Designation		
A	**Personal Service**	
1	Salaries	$ 786.25
B	**Supplies**	
1	Office	95.58
2	Fuel	203.20
10	General Plant	23.98
C	**Material**	
1	Highway	1,281.79
2	Sewer	270.80
3	Building	8.12
4	General Plant	459.95
D	**Equipment**	
1	Office	185.85
5	Motor Vehicle	208.50
7	General Plant	890.59
E 1	**Construction and Extension**	
	Street Signs and Monuments	1,014.30
	Sewer Outfalls	1739.29
	Bench Level Surveys	23.82
	Reconstruction of Curved Corners	338.22
	Repairs	
2	Maintenance of Streets	6,208.65
2	General	731.83
3	Motor Vehicle	2.63
	Light, Heat and Power	
4c	Power	4.65
	Transportation	
6a	Hire of Horses and Vehicles	552.75
6c	Storage of Automobiles	2.50
6d	Shoeing and Boarding of Horses, including Veterinary	3.50
F	Contingencies	251.93
	Total Claims Paid	$ 15,288.68
	Warrants Drawn	$ 15,005.71
	Add Miscellaneous Debits	321.58
	Deduct Miscellaneous Credits	38.61
	Total Expenditures	$ 15,288.68
	Claims Outstanding	
	Total Encumbrance	$ 15,288.68
	Total Appropriation	76,276.33
	Balance of Appropriation Canceled	$ 60,987.65

RECAPITULATION OF GENERAL FUND
Appropriations and Expenditures by Departments

	Warrants Drawn	Miscellaneous Debits	Miscellaneous Credits	Total Expenditures	Claims Outstanding	Total Encumbrance	Total Appropriation	Appropriation Canceled	Appropriation Carried Forward
DEPARTMENT OF PUBLIC SAFETY									
Mayor's Office	$ 10,174.88	126.80	.50	10,301.18	13.96	10,315.14	10,423.00	107.86	.....
Bureau of Fire	564,736.60	30,015.15	11,460.42	583,291.33	24,078.84	607,370.17	708,518.03	100,897.86	250.00
Municipal Court	7,027.38	171.65	.....	7,199.03	71.50	7,270.53	8,207.00	936.47	.....
Bureau of Police	382,772.08	2,416.94	356.53	384,832.49	1,506.86	386,339.35	447,407.67	60,489.17	579.15
Bureau of Health	52,417.52	2,713.46	270.84	54,860.14	1,703.16	56,563.30	60,640.00	4,076.70	.....
Pound	5,567.73	159.39	.....	5,727.12	21.00	5,748.12	7,348.00	1,599.88	.....
Public Defender	1,508.03	.....	.....	1,508.03	.....	1,508.03	1,510.80	2.77	.....
Board of Motion Picture Censors	765.80	159.68	.....	925.48	6.25	931.73	1,007.25	575.52	.....
	1,024,970.02	35,763.07	12,088.29	1048,644.80	27,401.57	1076,046.37	1245,061.75	168,186.23	829.15
DEPARTMENT OF PUBLIC AFFAIRS									
Comimssioner of Public Affairs	7,610.05	127.34	1.26	7,736.13	40.00	7,776.13	7,830.00	53.87	.....
Bureau of Parks	183,009.55	4,017.26	1,444.66	185,582.15	7,222.17	192,804.32	194,470.97	866.65	800.00
Office of City Attorney	26,018.69	474.07	44.61	26,448.15	1,302.61	27,750.76	28,859.86	1,109 10	.....
Bureau of City Hall	19,358.10	40.06	.....	19,398.16	287.30	19,685.46	20,209.50	524.04	.....
Bureau of Weights and Measures	3,747.03	69.78	275.00	3,541.81	86.00	3,627.81	4,175.00	547.19	.....
Bureau of Free Employment	3,876.33	93.53	.....	3,969.86	.....	3,969.86	4,105.00	135.14	.....
Municipal Reference Library	39.99	.....	.....	39.99	.....	39.99	40.00	.01	.....
Free Museum	307.70	.....	.....	307.70	191.50	499.20	500.00	.80	.....
	243,967.44	4,822.04	1,765.53	247,023.95	9,129.58	256,153.53	260,190.33	3,236.80	800.00
DEPARTMENT OF FINANCE									
Commissioner of Finance	$ 6,032.88	38.88	.....	6,071.76	.....	6,071.76	6,270.00	198.24	.....
Bureau of Licenses	.....	47.30	.....	47.30	.....	47.30	50.00	2.70	.....
Office of City Treasurer	21,328.35	684.26	44.52	21,968.09	133.75	22,101.84	22,327.00	225.16	.....
Municipal Garage	6,579.22	795.60	590.24	6,784.58	210.60	6,995.18	8,659.60	1,664.42	.....
Public Market	5,483.17	94.15	.....	5,577.32	52.50	5,629.82	6,060.10	430.28	.....
Bureau of Purchases	9,867.00	476.92	110.50	10,233.42	19.69	10,253.11	10,519.75	266.64	.....
City Storehouse	1,141.54	45.22	.....	1,186.76	.....	1,186.76	1,372.50	185.74	.....
Municipal Shop Equipment	956.47	6.76	.....	963.23	.....	963.23	1,000.00	36.77	.....
	$ 51,388.63	2,189.09	745 26	52,832.46	416.54	53,249.00	56,258.95	3,009.95	.....

RECAPITULATION OF GENERAL FUND—Continued
Appropriations and Expenditures by Departments

	Warrants Drawn	Miscellaneous Debits	Miscellaneous Credits	Total Expenditures	Claims Outstanding	Total Encumbrance	Total Appropriation	Appropriation Canceled	Appropriation Carried Forward
DEPARTMENT OF PUBLIC UTILITIES									
Commissioner of Public Utilities	9,614.55	137.83	2.66	9,749.72	.....	9,749.72	14,805.00	5,055.28	.....
Motor Bus Inspection	326.67	34.58	.....	361.25	.....	361.25	950.00	588.75	.....
Lighting Streets and Public Places	174,075.37	114.56	47.34	174,142.59	17,000.00	191,142.59	196,500.00	5,357.41	.....
Bureau of Street Cleaning	309,477.19	3,884.73	491.75	312,870.17	1,669.98	314,540.15	336,725.96	22,185.81	.....
Bureau of Garbage Disposal	21,208.99	104.38	2.10	21,311.27	5.50	21,316.77	25,535.25	4,218.48	.....
	$ 514,702.77	4,276.08	543.85	518,435.00	18,675.48	537,110.48	574,516.21	37,405.73	.....
DEPARTMENT OF PUBLIC WORKS									
Expense Public Works Department	$ 338,129.92	10,864.55	9,715.33	339,279.14	10,95_ 54	350,231.68	38_,587.25	32,355.57	.....
Permanent Works	17,827.71	154.47	27.26	17,954.92	2,263.82	20,218.74	21,200.00	981.26	.....
Removal of Brush and Weeds	1,958.43	62.38	.....	2,020.81	.....	2,020.81	2,852.38	831.57	.....
Peninsula Dist. Sewer Survey	3,260.01	96.74	4.50	3,352.25	49.75	3,402.00	4,018.02	.....	616.02
Repairs to Patton Road Sewer	558.96	.....	.....	558.96	.....	558.96	558.96	.....	.....
Repairs to Retaining Walls	32.48	.....	.....	32.48	.....	32.48	1,153.00	1,120.52	.....
Repairs to Montgomery Drive Retaining Wall	614.34	.....	.....	614.34	20.00	634.34	1,200.00	.....	565.66
Repairs to Maywood Drive	2,745.76	2.10	.....	2,747.86	108.00	2,855.86	3,179.59	323.73	.....
Repairs to Grand Avenue Bridge	9,266.15	65.15	.....	9,331.30	.....	9,331.30	10,802.24	1,470.94	.....
Repairs to First Street Bridge	606.49	.....	.....	606.49	.....	606.49	1,100.00	493.51	.....
Repairs to Union Avenue Bridge	865.66	3.00	211.35	657.31	.....	657.31	1,712.21	1,054.90	.....
Repairs to Front Street Bridge	325.50	.....	.....	325.50	.....	325.50	543.64	218.14	.....
Removal of Obstructions to Navigation	3,154.95	2.73	.....	3,157.68	.....	3,157.68	4,971.56	1,813.88	.....
Repairs to Pavement, Broadway Bridge	.....	.....	.40	* .40	.....	* .40	1,224.02	.....	1,224.42
Repairs to Morrison Street Bridge	717.60	44.58	.....	762.18	.....	762.18	821.37	59.19	.....
Repairs to Bridges	1,424.16	.....	.....	1,424.16	.....	1,424.16	1,424.16	.....	.....
Refilling East Alder Street Sewer	.....	.....	.....	.....	.....	.....	1,200.00	.....	1,200.00
Construction East 31st Street Sewer	.....	.....	.....	.....	1,349.70	1,349.70	1,504.00	.....	154.30
Additional Booths Public Market	.....	.....	.....	.....	.....	.....	102.18	102.18	.....
	$ 381,488.12	11,295.70	9,958.84	382,824.98	14,743.81	397,568.79	442,154.58	40,825.39	3,760.40
DEPARTMENT OF AUDITING	$ 44,795.54	3,223.66	1,315.66	46,703.54	673.41	47,376.95	47,997.31	620.36	.....

*Credit.

RECAPITULATION OF GENERAL FUND—Continued
Appropriations and Expenditures by Departments

	Warrants Drawn	Miscellaneous Debits	Miscellaneous Credits	Total Expenditures	Claims Outstanding	Total Encumbrance	Total Appropriation	Appropriation Canceled	Appropriation Carried Forward
CIVIL SERVICE BOARD	3,996.66	254.81	.....	4,251.47	51.96	4,303.43	4,760.00	456.57	.....
Special Appropriations	123,304.60	17,432.32	2,853.12	137,883.80	23,020.06	160,903.86	187,592.76	14,441.75	12,247.15
Rotary Accounts	50,475.97	19,993.64	.....	70,469.61	5,400.18	75,869.79	81,250.92	.....	5,381.13
Street Extension Accounts	27,506.47	.....	1,425.00	26,081.47	.....	26,081.47	26,081.47	.....	.....
	$ 201,287.04	37,425.96	4,278.12	234,434.88	28,420.24	262,855 12	294,925.15	14,441.75	17,628.28
APPROPRIATIONS BROUGHT FORWARD FROM 1914									
Bureau of Fire	$ 5,108.24	2,218.94	.....	7,327.18	.....	7,327.18	82,302.63	74,975.45	.....
Municipal Court	45.00	31.49	.....	76.49	.....	76.49	957.39	880.90	.....
Bureau of Police	3,076.94	32.50	35.93	3,073.51	.....	3,073.51	44,787.70	41,714.19	.....
Bureau of Health	1,205.55	.....	.....	1,205.55	.....	1,205.55	1,794.92	589.37	.....
Pound	18.27	.....	.....	18.27	.....	18.27	1,460.30	1,442.03	.....
Office of Treasurer	6.00	.....	.....	6.00	.....	6.00	6.00	.....	.....
Municipal Garage	182.81	.....	.....	182.81	.....	182.81	721.87	539.06	.....
Public Market	276.85	.....	.....	276.85	.....	276.85	276.85	.....	.....
Bureau of Purchases	14.55	22.89	.....	37.44	.....	37.44	464.10	426.66	.....
Commissioner of Public Affairs	18.95	3.34	.....	22.29	.....	22.29	247.87	225.58	.....
Bureau of Parks	3,130.95	116.68	.....	3,247.63	.....	3,247.63	5,201.24	1,953.61	.....
Office of City Attorney	260.55	25.99	.....	286.54	.....	286.54	2,900.90	2,614.36	.....
Bureau of City Hall	1,355.55	.....	.....	1,355.55	.....	1,355.55	3,256.98	1,901.43	.....
Bureau of Weights and Measures	29.50	12.35	.....	41.85	.....	41.85	112.87	71.02	.....
Bureau of Free Employment	38.50	.....	.....	38.50	.....	38.50	814.90	776.40	.....
Department of Public Works	15,005.71	321.58	38.61	15,288.68	.....	15,288.68	76,276.33	60,987.65	.....
Lighting Streets and Public Places	15,388.63	34.75	.....	15,423.38	.....	15,423.38	26,875.89	11,452.51	.....
Bureau of Street Cleaning	4,152.43	.....	.....	4,152.43	.....	4,152.43	34,901.01	30,748.58	.....
Bureau of Garbage Disposal	124.22	.....	.....	124.22	.....	124.22	3,962.39	3,838.17	.....
Office of Auditor	1,789.62	140.75	.....	1,930.37	.....	1,930.37	6,937.55	5,007.18	.....
Special 1914 Accounts	11,550.69	27.77	.....	11,578.46	4.00	11,582.46	18,786.68	7,162.22	42.00
	$ 62,779.51	2,989.03	74.54	65,694.00	4.00	65,698.00	313,046.37	247,306.37	42.00

GRAND RECAPITULATION OF GENERAL FUND
Appropriations and Expenditures

	Warrants Drawn	Miscellaneous Debits	Miscellaneous Credits	Total Expenditures	Claims Outstanding	Total Encumbrance	Total Appropriation	Appropriation Canceled	Appropriation Carried Forward
Department of Public Safety	1,024,970.02	35,763.07	12,088.29	1,048,644.80	27,401.57	1,076,046.37	1,245,061.75	168,186.23	829.15
Department of Public Affairs	243,967.44	4,822.04	1,765.53	247,023.95	9,129.58	256,153.53	260,190.33	3,236.80	800.00
Department of Finance	51,388.63	2,189.09	745.26	52,832.46	416.54	53,249.00	56,258.95	3,009.95	.....
Department of Public Utilities	514,702.77	4,276.08	543.85	518,435.00	18,675.48	537,110.48	574,516.21	37,405.73	.....
Department of Public Works	381,438.12	11,295.70	9,958.84	382,824.98	14,743.81	397,568.79	442,154.58	40,825.39	3,760.40
Department of Auditing	44,795.54	3,223.66	1,315.66	46,703.54	673.41	47,376.95	47,997.31	620.36	.....
Civil Service Board	3,996.66	254.81	.....	4,251.47	51.96	4,303.43	4,760.00	456.57	.....
Special Appropriations, Rotary Accounts and Street Extensions	201,287.04	37,425.96	4,278.12	234,434.88	28,420.24	262,855.12	294,925.15	14,441.75	17,628.28
Prior Year Accounts	62,779.51	2,989.03	74.54	65,694.00	4.00	65,698.00	313,046.37	247,306.37	42.00
	2,529,375.73	102,239.44	30,770.09	2,600,845.08	99,516.59	2,700,361.67	3,238,910.65	515,489.15	23,059.83

RECAPITULATION OF APPROPRIATIONS AND EXPENDITURES BY FUNDS

	Warrants Drawn	Interest Paid	Cremato-ry Bonds Re-deemed	Miscel-laneous Debits	Miscel-laneous Credits	Total Expendi-tures	Claims Out-standing	Total Encum-brance	Total Appropri-ation	Appropri-ation Canceled	Appropri-ation Car-ried For-ward
General Fund—Expense	2,529,375.73	3,675.00	10,800.00	87,764.44	30,770.09	2,600,845.08	99,516.59	2,700,361.67	3,238,910.65	515,489.15	23,059.83
Bonded Indebtedness Interest Fund—Payment of Interest	129.40	280,220.00	.....	36,580.00	.90	316,928.50	.....	316,928.50	329,653.50	.....	12,725.00
Sinking Fund—Purchase of Securities	136,512.09	.....	.....	.....	.....	136,512.09	.....	136,512.09	165,124.60	.....	28,612.51
Special Bridge Fund—Elimination of Grade Crossings	7,435.24	.....	.....	409.44	47.26	7,797 42	.....	7,797.42	28,196.95	.....	20,399.53
Water Fund—Expense	706,133.33	310,377.50	.....	6,561.37	4,107.67	1,018,964.53	19,002.76	1,037,967.29	1,311,163.81	273,196.52	.....
Water Bond Sinking Fund—Purchase of Securities	128,250.00	.....	.....	.....	.....	128,250.00	.....	128,250.00	138,400.87	.....	10,150.87
Redemption Fund—Redemption of Certificates	16,285.74	.....	.....	.....	.....	16,285.74	.....	16,285.74	25,960.44	.....	9,674.70
Public Auditorium Fund—Construction of Auditorium	10,300.00	.....	.....	.....	.....	10,300.00	.....	10,300.00	18,118.67	.....	7,818.67
Park and Blvd. Fund—Purchase of Parks and Establishment of Boulevards	7,215.53	.....	.....	.....	356.47	6,859.06	.....	6,859.06	9,006.83	.....	2,147.77
Broadway Bridge Fund—Construction and Fireproofing	195.91	.....	.....	44.45	.....	240.36	.....	240.36	6,133.55	.....	5,893.19
Mt. Hood Ry. & Power Co.—Payment of Franchise	2,000.00	.....	.....	.....	.....	2,000.00	.....	2,000.00	2,000.00	.....	.....
Special Tax Fund—1915 Distribution of Taxes	247.34	.....	.....	.....	.....	247.34	.....	247.34	247.34	.....	.....
Police Relief Fund—Payment of Sick Benefits	1,541.39	.....	.....	.....	64.23	1,477.16	.....	1,477.16	3,051.88	.....	1,574.72
	3,545,621.70	594,272.50	10,800.00	131,359.70	35,346.62	4,246,707.28	118,519.35	4,365,226.63	5,275,969.09	788,685.67	122,056.79

DETAILED STATEMENT OF LICENSE RECEIPTS FOR THE YEAR ENDING NOVEMBER 30, 1915, SHOWING NUMBER OF LICENSES OF EACH CLASS

	December		January		February		March		April		May	
	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount
Abstracters	1	3.75	10	37.50	5	18.75			12	45.00	3	11.25
Advertising in Street Cars					1	250.00						
Auctioneers—Class 1			8	380.00					6	240.00		
Auctioneers—Class 2												
Amusement Parks—Class 1												
Amusement Parks—Class 2												
Banks	1	60.00	11	291.62	1	60.00	2	67.50	11	274.53	1	7.50
Baths (Vapor, etc)			9	75.00	1	7.50	1	7.50	7	52.50	1	7.50
Bill Posting and Distributing	1	400.00	5	140.00	3	19.95	4	13.40	4	80.00	3	39 91
Bowling Alleys	2	15.00	4	75.00	1	5.00					1	20.00
Brokers, General	3	15.00	18	105.00	9	60.00	7	35.00	23	115.00	4	18.35
Brokers, Stocks on Mar					2	41.65			2	50.00		
Baseball Parks									1	100.00		
Chimney Sweeps												
Chiropodists	2	3.30	14	70.00	2	8.35	2	3.30	16	80.00	1	3.35
Cloth Banners Over Streets			1	2.50	1	5.00						
Collection Agents	1	12.50	4	42.50	11	110.00	5	50.00	6	60.00	4	36.65
Country Club									1	1.00		
Dance Hall Registrations	2	9.75	34	162.50	11	48.00	2	6.50				
Dancing Permits	110	81.50	90	85.00	103	74.50	84	51.00	106	92.50	80	43.50
Detectives	1	10.00	4	400.00	1	25.00					2	116.72
Dog Breeders	1	5.00	2	10.00	1	5.00					1	5.00
Dog Licenses—Male	143	426.00	386	1,158.00	213	639.00	116	348.00	97	291.00	52	156.00
Dog Licenses—Female	37	185.00	89	445.00	40	200.00	34	170.00	26	130.00	12	60.00
Explosives	3	15.00	3	35.00					1	5.00		
Employment Agents, General												
Employment Agents, Women Only												
Express Companies	1	25.00	4	100.00					3	75.00	1	25.00
Electricity for Light and Power			2	150.00					2	150.00		
Firearms			1	25.00			1	25.00				
Fire Patrol			1	50.00					1	50.00		
Gasoline Filling Stations	6	64.00	29	348.00	16	192.00	12	149.00	3	36.00	6	72.00
Gas for Light and Fuel			1	100.00								
House Movers			1	10.00	1	10.00	4	38.35	1	25.00	2	20.00
Hawkers, Class 1			9	1,350.00					8	1,200.00		
Hawkers, Class 2			16	800.00			1	50.00	16	800.00	2	100.00
Hawkers, Class 3	1	16.65										
Insurance and Bonds	12	143.35	552	2,760.00	100	496.65	38	190.00	601	3,003 35	62	306.65

DETAILED STATEMENT OF LICENSE RECEIPTS FOR THE YEAR ENDING NOVEMBER 30, 1915, SHOWING NUMBER OF LICENSES OF EACH CLASS—Continued

	December		January		February		March		April		May	
	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount
Junk Wagons	2	10.00	68	340.00	2	10.00	2	10.00	70	350.00	2	10.00
Laundries	6	30.00	38	190.00	28	175.00	6	30.00	50	265.00	8	40.00
Liquor Dealers, Retail, Class A	307	122,800.00	1	400.00	....	....	....	....	....	....	....	....
Liquor Dealers, Retail, Class B	19	9,500.00	....	....	....	....	....	....	....	....	....	....
Liquor Dealers, Wholesale	16	6,400.00	....	....	....	....	....	....	....	....	....	....
Liquor Dealers, Wholesale and Rectify	7	3,500.00	....	....	....	....	....	....	....	....	....	....
Liquor Dealers, Grocers	15	3,000.00	....	....	....	....	....	....	....	....	....	....
Liquor Dealers, Restaurants	14	5,600.00	....	....	....	....	....	....	....	....	....	....
Liquor Dealers, Brewers	3	900.00	....	....	....	....	....	....	....	....	....	....
Lunch Wagons	....	....	....	....	....	....	1	33.35	1	100.00	....	....
Mercantile Agencies	....	....	3	50.00	1	25.00	1	25.00	2	37.50	....	....
Messenger Companies	....	....	....	....	1	100.00	3	300.00	....	....	....	....
Merry-Go-Rounds	....	....	....	....	....	....	....	....	....	....	....	....
Milk and Cream—Cans	8	4.00	31	15.50	22	11.00	13	6.50	12	6.00	16	8.00
Milk and Cream—Creameries	1	5.00	8	40.00	8	40.00	....	....	....	....	....	....
Milk and Cream—Dairy Wagons	35	90.00	128	342.50	35	137.50	16	42.50	16	40.00	8	19.50
Milk and Cream—Stores	61	61.00	615	615.00	71	71.00	34	34.00	17	17.00	11	11.00
Motor Buses	....	....	....	....	....	....	....	....	....	....	....	....
Oil (Explosive) Storage	....	....	4	21.00	....	....	....	....	3	9.00	....	....
Oil Tank Vehicles	....	....	27	270.00	1	20.00	....	....	27	270.00	2	20.00
Pawnbrokers	1	75.00	10	750.00	2	150.00	....	....	....	....	2	150.00
Peddlers, Class 1	....	....	....	....	....	....	....	....	....	....	....	....
Peddlers, Class 2	....	....	174	2,610.00	2	30.00	2	30.00	172	2,580.00	3	45.00
Peddlers, Class 3	3	7.50	5	37.50	....	....	....	....	3	22.50	1	10.00
Peddlers, Class 4	2	10.00	2	30.00	4	40.00	5	45.00	1	15.00	1	5.00
Peddlers, Class 5	12	12.00	6	18.00	4	8.00	2	2.00	3	9.00	....	....
Peddlers, Class 6	1	1.00	44	220.00	3	13.35	....	....	46	225.00	4	15.05
Pool and Billiards	50	849.20	134	2,765.00	24	290.00	14	205.00	3	15.00	3	111.65
Scavengers	1	3.00	131	393.00	3	7.00	2	4.00	138	414.00	2	5.00
Street Railway Cars	....	....	86	2,320.00	....	....	....	....	86	2,352.00	....	....
Safe Deposit Vaults	....	....	2	20.00	....	....	....	....	2	20.00	....	....
Second Hand	4	20.00	137	685.00	15	75.00	10	50.00	164	820.00	8	40.00
Shooting Galleries	2	33.35	2	50.00	1	16.65	2	16.70	5	125.00	....	....
Shows and Exhibitions	1	30.00	1	50.00	....	....	....	....	2	30.00	2	192.00
Skating Rinks, Ice	....	....	....	....	1	25.00	....	....	....	....	....	....
Skating Rinks, Roller	1	8.35	2	50.00	....	....	....	....	1	25.00	1	16.65
Solicitors and Runners	29	285.00	24	240.00	6	20.10	9	21.55	17	85.00	11	50.15
Storage	7	59.00	11	63.50	10	43.86	7	42.15	16	86.50	7	46.51

DETAILED STATEMENT OF LICENSE RECEIPTS FOR THE YEAR ENDING NOVEMBER 30, 1915, SHOWING NUMBER OF LICENSES OF EACH CLASS—Continued

	December		January		February		March		April		May	
	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount
Telegraph Companies	....	.....	1	75.00	....	.....	1	75.00	....	.....	....	.....
Telephone Companies	....	.....	2	100.00	....	.....	....	.....	2	100.00	....	.....
Theatres	15	410.00	31	711.80	16	223.65	13	131.30	57	963.11	2	14.05
Wood Saws	1	5.00	47	235.00	8	40.00	1	5.00	7	35.00	8	40.00
Wharfingers	2	50.00	12	320.00	7	130.00	3	40.00	22	600.00	2	80.00
Transient Merchants	1	20.00	....	.....	....	.....	....	.....	1	20.00	....	.....
License Receipts per month	....	$ 155,272.20		23,235.42		3,978.46		2,373.60		16,592.49		1,978.94
Licenses issued per month	955		3096		798		460		1900		342	

DETAILED STATEMENT OF LICENSE RECEIPTS FOR THE YEAR ENDING NOVEMBER 30, 1915, SHOWING NUMBER OF LICENSES OF EACH CLASS—Continued

	June		July		August		September		October		November		Total for Year	
	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount
Abstracters			11	41.25	5	18.75			9	33.75	7	25.00	63	235.00
Advertising in Street Cars													1	250.00
Auctioneers—Class 1			7	280.00					6	240.00	1	40.00	28	1,180.00
Auctioneers—Class 2	1	20.00											1	20.00
Amusement Parks, Class 1	1	300.00											1	300.00
Amusement Parks, Class 2	1	150.00											1	150.00
Banks			11	262.36	2	32.09	1	7.50	13	281.05	1	7.50	55	1,351.65
Baths (Vapor, etc.)			10	75.00					10	75.00			39	300.00
Bill Posting and Dist	3	20.03	1	10.00	7	46.55	3	20.10	2	20.00	2	13.31	38	823.25
Bowling Alleys	3	25.00	3	110.00	1	10.00					2	6.70	17	266.70
Brokers, General	5	36.65	18	105.00	9	63.35	3	11.65	20	100.00	8	40.00	127	725.00
Brokers, Stocks on Mar			2	50.00					2	50.00			8	151.65
Baseball Parks													1	100.00
Chimney Sweeps											11	11.00	11	11.00
Chiropodists	4	13.30	16	80.00	4	16.67	1	5.00	16	80.00	1	3.35	79	366.62
Cloth Banners Over Streets													2	7.50
Collection Agents	1	10.00	2	15.00					1	10.00	1	1.65	36	348.30
Country Club													1	1.00
Dance Hall Registrations	1	3.25							1	3.25			51	233.25
Dancing Permits	68	48.50	34	42.00	23	17.50	43	47.50	81	63.50	110	68.00	932	715.00
Detectives											1	8.35	9	560.07
Dog Breeders			1	5.00			12	62.00	4	20.00	2	10.00	24	122.00
Dog Licenses—Male	16	48.00	10	30.00	3	9.00	1921	5,763.00	485	1,455.00	383	1,149.00	3826	11,475.00
Dog Licenses—Female	7	35.00	1	5.00	3	15.00	265	1,325.00	95	475.00	106	530.00	715	3,575.00
Explosives			2	15.00					1	5.00			10	75.00
Employment Agents, General			8	1,000.00							1	122.20	9	1,122.20
Employment Agents, Women Only			2	80.00									2	80.00
Express Companies			2	50.00	1	25.00					1	25.00	13	325.00
Electricity for Light & Power			2	150.00					2	150.00			8	600.00
Firearms													2	50.00
Fire Patrol			1	50.00							1	50.00	4	290.00
Gasoline Filling Stations	3	36.00	2	24.00	8	96.00	3	36.00	4	48.00	8	96.00	100	1,197.00
Gas for Light and Fuel	1	100.00											2	200.00
House Movers			1	25.00					1	25.00			11	153.35
Hawkers, Class 1			6	900.00					8	1,200.00			31	4,650.00
Hawkers, Class 2	1	50.00	25	1,250.00					11	550.00	1	50.00	73	3,650.00
Hawkers, Class 3													1	16.65

DETAILED STATEMENT OF LICENSE RECEIPTS FOR THE YEAR ENDING NOVEMBER 30, 1915, SHOWING THE NUMBER OF LICENSES OF EACH CLASS—Continued

	June		July		August		September		October		November		Total for Year	
	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount
Insurance and Bonds	46	230.00	550	2,750.00	94	470.00	34	170.00	548	2,740.00	104	516.65	2741	13,776.65
Junk Wagons	3	15.00	74	370.00			1	5.00	67	335.00	5	25.00	296	1,480.00
Laundries	3	15.00	43	220.00	13	65.00	5	25.00	39	195.00	13	65.00	252	1,315.00
Liquor Dealers—														
Retail, Class A	283	113,600.00	3	998.25							1	115.25	595	237,913.50
Retail, Class B	17	8,500.00											36	18,000.00
Wholesale	15	6,000.00											31	12,400.00
Wholesale and Rectify	4	2,000.00											11	5,500.00
Grocers	15	3,000.00											30	6,000.00
Restaurants	10	4,000.00											24	9,600.00
Brewers	3	900.00											6	1,800.00
Lunch Wagons							1	33.35	2	200.00			5	366.70
Mercantile Agencies			3	62.50					3	62.50	1	12.50	14	275.00
Messenger Companies							1	100.00	2	200.00			7	700.00
Merry-Go-Rounds	2	23.35			10	22.50							12	45.85
Milk and Cream—Cans	9	4.50	9	4.50	13	6.50	7	3.50	5	2.50	4	2.00	149	74.50
Milk and Cream—Creameries							1	5.00					18	90.00
Milk and Cream—Dairy Wgns	4	10.00	8	19.50	3	7.50	4	10.00	2	5.00			259	724.00
Milk and Cream—Stores	32	32.00	27	27.00	14	14.00	15	15.00	5	5.00	3	3.00	905	905.00
Motor Buses							11	22.00					11	22.00
Oil (Explosive) Storage			5	49.00	2	40.00	1	20.00	6	69.00			21	208.00
Oil Tank Vehicles	20	180.05	15	150.00			7	63.35	27	270.00			126	1,243.40
Pawnbrokers	1	75.00	7	525.00	1	75.00	2	30.00			2	150.00	28	1,980.00
Peddlers, Class 1			1	50.00	1	33.35							2	83.35
Peddlers, Class 2	3	45.00	171	2,565.00	5	75.00			166	2,490.00	5	75.00	703	10,545.00
Peddlers, Class 3			3	22.50					4	30.00	3	15.00	22	145.00
Peddlers, Class 4	31	155.00	5	25.00			1	5.00					52	330.00
Peddlers, Class 5			1	3.00	2	5.00			7	21.00	1	2.00	38	80.00
Peddlers, Class 6	2	3.30	42	210.00	6	25.05			45	225.00	5	21.70	198	959.45
Pool and Billiards	68	1,039.20	121	2,565.00	7	152.50	9	115.05	11	102.50	5	26.70	449	8,236.80
Scavengers	79	235.00	60	180.00			29	87.00	93	279.00	4	11.00	542	1,618.00
Street Railway Cars			86	2,506.25					88	2,441.65			346	9,619.90
Safe Deposit Vaults			2	20.00					2	20.00			8	80.00
Second Hand	9	50.00	162	815.00	4	20.00	5	25.00	160	800.00	8	40.00	686	3,440.00
Shooting Galleries			2	50.00	1	16.65			3	75.00	1	16.65	19	400.00
Shows and Exhibitions					2	220.00							8	522.00
Skating Rinks, Ice									1	25.00			2	50.00
Skating Rinks, Roller			1	25.00									6	125.00

DETAILED STATEMENT OF LICENSE RECEIPTS FOR THE YEAR ENDING NOVEMBER 30, 1915, SHOWING THE NUMBER OF LICENSES OF EACH CLASS—Continued

	June		July		August		September		October		November		Total for Year	
	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount
Solicitors and Runners	43	169.75	80	400.00	21	72.00	27	111.55	69	345.00	8	26.80	344	1,826.90
Storage	12	46.00	13	81.36	15	74.58	4	10.00	15	88 43	13	52.60	130	694.49
Telegraph Companies	1	75.00	....	.....	....	.....	....	.....	1	75.00	....	.....	4	300.00
Telephone Companies	....	.....	2	100.00	....	.....	....	.....	1	50.00	1	50.00	8	400.00
Theatres	12	166.65	38	773.90	2	14.30	12	187.80	45	872.80	3	40.57	246	4,509.93
Wood Saws	7	35.00	13	65.00	6	30.00	2	10.00	1	5.00	....	.....	101	505.00
Wharfingers	1	20.00	18	580.00	....	.....	....	.....	16	420.00	4	140.00	87	2,380.00
Transient Merchants	1	20.00	....	.....	....	.....	1	20.00	4	80.00	....	.....	8	160.00
License Receipts per month		$ 141,540.53		20,867.37		1,788.84		8,351.35		17,413.93		36,664.48		397,057.61
Licenses issued per month	852		1743		288		2432		2210		842		15918	

THE BONDED INDEBTEDNESS OF THE CITY OF PORTLAND, OREGON, NOVEMBER 30, 1915, AND THE INTEREST PAID THEREON

When Issued	Year Due	Years to Run	Rate of Int. %	PURPOSE OF ISSUE	Amount of Bonds	Interest Due	Interest Paid	Interest Out Nov. 30, 1915
				CITY HALL				
Jan. 1, 1890	1920	30	5	Purchase of Site	$ 175,000	8,775	8,625	150
July 1, 1892	1922	30	5	Construction of Building	500,000	25,425	25,100	325
July 9, 1905	1916	10	6	Construction of Building	10,000	300	300	.....
					$ 685,000	34,500	34,025	475
				BRIDGES				
Jan. 1, 1892	1922	30	5	Purchase and Construction of Free Bridges	$ 500,000	$ 25,425		
Apr. 1, 1895	1925	30	5	Purchase of Morrison St. Bridge	200,000	10,000		
Jan. 1, 1904	1934	30	4	Construction of Morrison St. Bridge	400,000	16,520		
Jan. 1, 1909	1939	30	4	Construction Hawthorne Ave. Bridge	450,000	18,000		
July 1, 1910	1940	30	4	Construction Broadway Bridge	250,000	10,000	$ 138,270	355
Jan. 2, 1911	1941	30	4	Construction Broadway Bridge	500,000	20,000		
Sep. 1, 1911	1941	30	4	Construction Broadway Bridge	600,000	24,000		
Oct. 1, 1912	1942	30	4	Construction Broadway Bridge	315,000	12,600		
Jun. 1, 1913	1943	30	4	Construction Broadway Bridge	52,000	2,080		
					$ 3,267,000	138,625	138,270	355
				FERRY				
Apr. 1, 1893	1923	30	5	Construction of Free Ferry	$ 50,000	$ 2,575	$ 2,575	.....
Dec. 1, 1903	1933	30	5	Construction of Sellwood Ferry	15,000	750	750	.....
Jan. 1, 1904	1934	30	4	Construction of Albina Ferry	50,000	2,020	1,990	30
Mar. 21, 1911	1921	10	6	Purchase of Property, St. Johns	6,000	180	180	.....
					$ 121,000	$ 5,525	$ 5,495	$ 30
				GENERAL				
Dec. 1, 1898	1928	30	5	Funding Floating Debt	$ 430,000	21,500	21,500	.....
May 1, 1903	1928	25	4	Redeem Outstanding Bonds	56,500	2,260	2,260	.....
July 1, 1911	1936	25	4	Construction of Fire Boat	125,000	5,000	5,000	.....
Nov. 1, 1911	1941	30	4	Construction of Jail Building	200,000	8,360	7,800	560
Dec. 1, 1913	1938	25	4	Construction of Auditorium	35,000	1,400	1,400	.....
					$ 846,500	38,520	37,960	560

THE BONDED INDEBTEDNESS OF THE CITY OF PORTLAND, OREGON, NOVEMBER 30, 1915, AND THE INTEREST PAID THEREON—Continued

When Issued	Year Due	Years to Run	Rate of Int. %	PURPOSE OF ISSUE	Amount of Bonds	Interest Due	Interest Paid	Interest Out Nov. 30, 1915
				PARK AND BOULEVARD				
Dec. 1, 1903...	1933	25	4	Purchase and Improvement of Parks and Boulevards.	$ 500,000	$ 20,000	$ 40,020	
July 1, 1911...	1936	25	4	Purchase and Improvement of Parks and Boulevards.	250,000	10,000		.....
Oct. 1, 1912...	1937	25	4	Purchase and Improvement of Parks and Boulevards.	250,000	10,020		
					$ 1,000,000	$ 40,020	$ 40,020	
				EAST PORTLAND AND ALBINA BONDS				
May 1, 1891...	1921	30	6	Construction of Light Plant, East Portland.....	$ 50,000	$ 4,620	$ 4,320	$ 300
Jun. 1, 1891...	1921	30	6	Municipal Expenses, Albina.....	40,000	2,400	2,400	.....
Jun. 1, 1891...	1921	30	6	Construction of Boulevards and Roadways, Albina...	50,000	3,030	3,030	.....
Jun. 1, 1891...	1921	30	6	Purchase and Improvement of Parks, Albina.....	50,000	3,000	3,000	.....
					$ 190,000	13,050	$ 12,750	$ 300
				GARBAGE CREMATORY				
Sep. 1, 1910...	10% An.	10	5	Construction of Crematory.....	$ 50,000	$ 1,500	$ 3,675	
Dec. 1, 1911...	10% An.	10	5	Construction of Crematory.....	58,000	2,175		
					$ 108,000	3,675	$ 3,675	
				PUBLIC DOCKS*				
Nov. 1, 1911..	1961	50	4½	Purchase and Construction of Public Docks.....	$ 50,000			
May 1, 1915...	1943	30	4½	Purchase of Property and Construction of Docks.....	$ 1,250,000			
Sep. 1, 1913...	1923	10	5	Purchase of Property and Construction of Docks.....	200			
Dec. 1, 1913...	1943	30	4½	Purchase of Property and Construction of Docks.....	900,000			
Oct. 1, 1914...	1939	25	4½	Purchase of Property and Construction of Docks.....	100,000			
May 1, 1915...	1945	30	4½	Purchase of Property and Construction of Docks.....	100,000			
Apr. 21, 1908..	1928	20	6	Construction of Dock, St. Johns.....	60,000			
					$ 2,460,200			

*Accounts kept by the Commission of Public Docks not in City's general books.

THE BONDED INDEBTEDNESS OF THE CITY OF PORTLAND, OREGON, NOVEMBER 30, 1915, AND THE INTEREST PAID THEREON—Continued

When Issued	Year Due	Years to Run	Rate of Int. %	PURPOSE OF ISSUE	Amount of Bonds	Interest Due	Interest Paid	Interest Out Nov. 30, 1915
				WATER				
May 1, 1891...	1921	30	6	Construction of Water System, East Portland.....	$ 250,000	$ 21,060	$ 20,700	$ 360
Jan. 1, 1887...	1917	30	5	Purchase of Water Works.....	700,000	35,000	146,675	300
July 1, 1893...	1923	30	5	Construction of Bull Run System.....	2,200,000	111,975		
Jan. 1, 1909...	1934	25	4	Const'n. of new Pipe Line and Purchase of Property..	250,000	10,000		
Jun. 1, 1910...	1935	25	4	Const'n of new Pipe Line and Purchase of Property...	500,000	20,000	50,000	
Sep. 1, 1910...	1935	25	4	Const'n. of new Pipe Line and Purchase of Property..	500,000	20,000		
Jan. 1, 1911...	1936	25	4	Const'n. of new Pipe Line and Purchase of Property..	500,000	20,000		
Mar. 1, 1911...	1936	25	4	Const'n. of new Pipe Line and Purchase of Property..	500,000	20,000		
Oct. 1, 1911...	1936	25	4	Const'n. of new Pipe Line and Purchase of Property..	500,000	20,000		
Mar. 1, 1912...	1937	25	4	Const'n. of new Pipe Line and Purchase of Property..	500,000	20,000		
Nov. 1, 1912...	1937	25	4	Const'n. of new Pipe Line and Purchase of Property..	250,000	10,000		
Jun. 1, 1913...	1938	25	4	Const'n. of new Water Mains and Pur. of Property...	242,000	9,680		
Aug. 1, 1913..	1938	25	4	Const'n. of new Water Mains and Pur. of Property...	75,000	3,000	144,220	1,610
Sep. 1, 1913...	1938	25	4	Const'n. of new Water Mains and Pur. of Property...	250,000	10,000		
Nov. 1, 1913..	1538	25	4	Const'n. of new Water Mains and Pur. of Property....	22,000	880		
Dec. 1, 1913...	1938	25	4	Const'n. of new Water Mains and Pur. of Property...	285,000	11,400		
Feb. 2, 1914..	1939	25	4	Const'n. of new Water Mains and Pur. of Property...	175,000	7,000		
Dec. 1, 1914...	1939	25	4	Const'n. of new Water Mains and Pur. of Property...	135,000	2,700		
Mar. 1, 1915...	1940	25	4	Const'n. of new Water Mains and Pur. of Property...	460,000	11,170		
Apr. 1, 1913..	1933	20	5½	Construction of Water System, Linnton.....	100,000	2,970	3,685	660
May. 1, 1915..	1920	*	5½	Construction of Water System, Linnton.....	50,000	1,375		
					$ 8,444,000	368,210	365,280	2,930
				Grand Total.....	17,121,700	642,125	637,475	4,650
				Less Crematory Bonds redeemed.....	42,400			
				Net Total Bonds.....	17.079,300			

*$2,000 each year for 5 years, May 1, 1925; $3,000 each year for 5 years, May 1, 1930, $5,000 each year for 5 years.

Improvement Bonds outstanding Nov. 30, 1915, issued on account of street improvement, sewer, street extension and water main assessments, and not a part of the limitations by law as to indebtedness, $13,514,983.99.

BONDS HELD AS SINKING FUND INVESTMENTS, IN CUSTODY OF THE CITY TREASURER, NOVEMBER 30, 1915

Water Bond Sinking Fund Investments	$ 843,000.00
Sinking Fund Investments	616,024.78
Bonded Indebtedness Sinking Fund Investments	3,000.00
Public Docks Sinking Fund Investments	100,200.00
	$1,562,224.78

BONDED INDEBTEDNESS

General Bonds Outstanding	$17,079,300.00
Improvement Bonds Outstanding	13,503,645.21
Street Extension Bonds Outstanding	11,338.78
	$30,594,283.99

TAX LEVY FOR CITY PURPOSES, 1915 and 1916 AS FOLLOWS:

	1915	1916
General Fund	5.326 Mills	6.487 Mills
Bonded Indebtedness Interest Fund	1.043 Mills	1.096 Mills
Sinking Fund	.400 Mills	.400 Mills
Firemen's Relief and Pension Fund	.100 Mills	.100 Mills
Public Docks	.543 Mills	.600 Mills
Special Bridge	.088 Mills	.217 Mills
Total Tax Levy	7.500 Mills	8.900 Mills

ASSESSED VALUATION

	1915	1916
Real Estate and Improvements	$244,103,915.00	$237,951,255.00
Personal	37,566,580.00	33,660,700.00
Public Service	33,448,745.00	31,390,575.00
	$315,119,240.00	$303,002,530.00

Property assessed by County Assessor at 75 per cent of cash value on land and 50 per cent of cash value on buildings. Population 282,000, estimated.

INVENTORY NOV. 30, 1915—PERSONAL PROPERTY

Department of Public Safety—		
Mayor's Office	$ 897.05	
Bureau of Fire	565,979.68	
Bureau of Police	15,580.49	
Bureau of Health	6,325.33	
Bureau of Pound	1,445.55	
Municipal Court	352.08	
Moving Picture Censor	23.96	
Public Defender	182.28	
Harbor Master	5,002.24	$ 595,788.66
Department of Public Affairs—		
Office of Commisssioner	$ 458.45	
Bureau of City Hall	5,352.45	
Office of City Attorney	5,180.60	
Bureau of Parks	19,499.22	
Bureau of Public Employment	129.95	
Bureau of Weights and Measures	1,338.75	
Municipal Reference Library	251.00	
Free Museum	55,430.00	$ 87,640.42
Department of Finance—		
Office of Commissioner	$ 400.47	
Office of City Treasurer	4,359.90	
Bureau of Purchases	1,038.10	
Municipal Shop	3,753.69	
Municipal Stores	8,944.35	
Municipal Garage	975.63	
Public Markets	76.00	
Stationery Stock	3,795.13	
Bureau of Licenses	85.00	$ 23,428.27
Department of Public Utilities—		
Office of Commissioner	$ 604.60	
Bureau of Street Cleaning	74,306.13	
Bureau of Garbage Disposal	2,222.12	
Bureau of Water Works	227,196.85	$ 304,329.70
Department of Public Works—		
Office of Commissioner	$ 606.61	
Main Office	4,022.92	
Division of Highways and Bridges	13,025.77	
Division of Sewers	9,213.91	
Division of Surveys and Drafting	5,981.74	
Division of Buildings	1,764.75	
Division of Standards	7,318.20	
Division of City Engineer	578.50	$ 42,512.40
Civil Service Board	.....	$ 768.50
Commission of Public Docks	.....	23,243.87
Department of Auditing	$ 5,093.80	
Street improvement warrants surrendered to the City for General Fund Warrants, by authority of the Council, face value	83,619.04	
Street improvement and sewer warrants drawn in favor of the City, to cover the cost of engineering and advertising, value	70,144.55	$ 158,857.39
Total Value of personal property	.....	$1,236,569.21

OFFICE OF CITY AUDITOR—INVENTORY OF CITY PROPERTY—REAL PROPERTY

Name	Location	Area in Acres	Value of Land	Value of Improvements
	BUREAU OF CITY HALL			
City Hall Block	Between Fourth, Fifth, Madison and Jefferson Sts.	0.918	$ 300,000	$ 300,000
	BUREAU OF PARKS			
Park Blocks	A to F, inclusive, between Eighth St. and Park St. N. of Ankeny St., 7 to 20, inclusive, between Park St. and W. Park St. S. of Salmon St.	7.5	1,600,000	1,000
Lownsdale Square	Between Salmon, Main, Third and Fourth Sts.	.9	350,000	500
Chapman Square	Between Main, Madison, Third and Fourth Sts.	.9	300,000	500
Washington Park	Between Washington and Jefferson Sts	40.78	370,000	10,000
Terwilliger Park	Lowell and Macadam Sts	4.4	26,000	
Forestry Building	Twenty-eighth and Upshur Sts.	2.0	20,000	10,000
Ladd Parks	Five parcels in Ladd's Addition	1.5	10,000	
Holladay Park	Between Holladay Ave., Multnomah, Eleventh and Thirteenth Sts.	5.0	130,000	1,000
Macleay Park	South of Willamette Heights Addition	130.2	65,000	
Columbia Park	Lombard and Woolsey Sts.	30.	61,000	5,000
Governor's Park	Davenport St., Portland Heights	4.0	29,500	
Lincoln Park	Between Peech and Failing Sts., Mallory and Garfield Aves.	2.0	23,000	500
Sellwood Playground	Clatsop Ave. and E. Twenty-third St.	.88	1,100	500
Fulton Park	Southern Portland	30.0	12,000	
Peninsula Park	Portland Blvd., Ainsworth Ave., Albina Ave. and Kerby St	17.4	65,000	50,500
Sellwood Park	Sellwood	15.63	55,000	8,000
Kenilworth Park	E. Thirty-second St., E. Thirty-fourth St., Holgate St. to Cora Ave.	9.0	18,000	3,000
Laurelhurst Park	E. Oak, E. Ankeny, E. Thirty-third and E. Thirty-ninth Sts.	30.3	110,000	5,000
Patton Square	Patton Ave., Maryland Ave. and Emerson St	1.33	8,000	
Mt. Tabor Park	Mt. Tabor	176.0	422,000	3,600
Hillside Parkway	In. Secs. 10 and 16, T. 1 S., R. 1 E., W. M.	78.028	109,500	800
Gammans Square	Buffalo St., between Burrage and Wilbur Sts.	1.06	4,200	
Brooklyn Playground	N. E. cor. of Powell and Milwaukie Sts	2.00	13,000	1,700
Overlook Triangle	Block 20, Overlook	.04	600	
Lents Park	In Sec. 16, T. 1 S., R. 2 E., W. M	5.19	5,000	
E. Twenty-first Street Bridge	Block 39, Sullivan's Addition	.5	3,000	
	4 lots in Block 14, Proebstel's Addition	.43	2,500	
	Total Bureau of Parks		$ 3,813,400	$ 101,600
	PUBLIC AUDITORIUM			
Market Block	Between Second, Third, Clay and Market Sts	.918	130,000	

OFFICE OF CITY AUDITOR—INVENTORY OF CITY PROPERTY—REAL PROPERTY—Continued

Name	Location	Area in Acres	Value of Land	Value of Improvements
	BUREAU OF FIRE			
Engine 22	N. ½ Lot 4, Block 9, Portland	.057	10,500	15,000
Engine 1	Lot 6, Blk. 50, Portland	.11	87,000	8,000
Engine 4	Lot 6, Blk. 143, Portland	.11	6,150	15,000
Engine 3	E. ½ Lot 8, Blk. 315, Portland	.11	26,000	2,800
Engine 2	N. E. corner of Third and Glisan Sts.	.108	15,000	14,000
Engine 5	Lot 3, Blk. 128, Carruthers Addition.	.11	1,600	2,500
Engine 26	Lot 2, Blk. 291, Couch's Addition	.11	4,200	2,400
Engine 23	S. ½ Lot 7, Blk. 76, Stephens' Add	.057	950	7,000
Unimproved	Lot 14, Blk. 29, Albina Homestead	.139	1,100	
Unimproved	Lot 11, Blk. 10, Proebstel's Addition	.101	1,000	
Supply House	N. ½ Lot 6, Blk. 47, Holladay's Add	.057	2,500	1,800
Engine 33	Lot 13, Blk. 14, Multnomah	.11	2,400	800
Engine 20	Lots 12 and 13, Blk. 57, Sellwood	.22	3,100	1,000
Engine 10	Macadam Road	.11	600	3,000
Engine 12	Lot 4, Blk. 5, Wynkoop Villa	.168	1,400	3,000
Engine 13	Lot 5, Blk. 71, Holladay Add	.11	3,500	7,200
Engine 15	Lot 5, Blk. 104, Grover's Addition	.11	2,200	7,000
Unimproved	Lots 7 and 9, Blk. 2, Richmond	.22	2,100	
Engine 27	Lots 1 and 2, Blk. 11, Terrace Park	.22	650	8,400
Unimproved	Lots 28 and E. ½ 13, Blk. 5, Scenic Place	.17	2,000	
Engine 9	Lot 6, Blk. 20, Sunnyside	.076	2,600	15,000
Engine 11	N. W. cor. of E. Twelfth and Powell Sts	.22	700	3,000
Engine 14	Lot 6, Blk. 5, Maegley Highland	.11	1,700	1,000
Engine 7	N. ½ Lots 13, 14, 15, 16, Frush's Square	.11	6,000	8,000
Engine 17	Lot 16, Blk. 3, King's 2nd Addition	.11	5,200	12,000
Engine 8	Lot 20, Blk. 26, Albina	.167	4,400	15,000
Engine 18	Lots 14 and 15, Blk. 1, E. Irvington	.22	3,000	7,000
Engine 16	Lots 7 and 10, Blk. 1, Sub. 7, Portland	.22	8,500	15,000
Engine 19	S. 100 ft. of E. 100 ft. Lot 1, Blk. 2, Ramona	.22	1,700	9,000
Engine 25	Lots 1 and 2, Blk. 10, Kenilworth	.22	1,200	16,000
Engine 24	N. W. 100 ft. by 100 ft. of S. ½ Blk. B, Patton Tract	.22	7,000	15,000
Engine 30	Lots 33, 34 and 35, Blk. 38, Kenton	.17	900	8,000
Engine 31	Lots 8 and 9, Blk. 11, Kern Park	.22	800	2,880
Unimproved	W. ½ Lots 10, 11, Sherlock's Add. Blk. 17	.11	4,200	
Engine 28	Lots 1 and 2, Blk. 77, Rose City Park	.21	1,600	8,000
Unimproved	Lots 12, 13 and S. ½ 14, Blk. 29, Sunnyside	.18	2,500	
Engine 21	N. ½ Lot 3, Blk. 30, Portland	.057	35,000	50,000
Truck 3	E. ½ Lots 2 and 3, Blk. 99, Couch's Addition	.11	10,500	12,500
Unimproved	Lots 1, 2, 3, 4, Blk. 15, Willamette	.22	1,000	
Engine 29	426 Durham Ave			8,000
Fireboat House and Dock	Foot of E. Washington St		12,000	1,000
Engine 32	Blk. 1, James John Add., St. Johns	.50	8,000	20,000
Engine 6	Twenty-second and Nicolai Sts			1,500
	Total, Bureau of Fire		$ 292,450	$ 337,780
	BUREAU OF HEALTH			
Former site hospital for contagious diseases—unimproved	Tract "D," Sec. 5, T. 1 S., R. 1 E., W. M	2.0	2,625	
Smallpox Hospital	Plympton Kelly D. L. C., Sec. 9, T. 1 S., R. 1 E., W. M			2,568
	Total, Bureau of Health		$ 2,625	$ 2,568

OFFICE OF CITY AUDITOR—INVENTORY OF CITY PROPERTY—REAL PROPERTY—Continued

Name	Location	Area in Acres	Value of Land	Value of Improvements
	BUREAU OF POLICE			
Police Station	Lots 3 and 4, Blk. 30, Portland	.22	200,000	285,000
Old Albina police station and jail site	N. E. 25 ft. Lots 3 and 4, Blk. 56, Albina	.057	2,100	
Unimproved	S. 50 ft. Lot 1, Blk. 1, Albina	.057	7,000	
	Total, Bureau of Police		$ 209,100	285,000
	FERRY APPROACHES			
New Albina Ferry	West Side, N. 60 ft. of Lot 21, Blk. 2, Doscher's Add. and S. 5 ft. of Lot 22, Blk. 2, Doscher's Addition	.3	$ 37,500	
	East Side, Southerly 65 ft. of Lot 9, Albina River Lots	.45	19,500	
	Total, Ferry Approaches		$ 57,000	
	BUREAU OF STREET CLEANING			
West Side Barn	Lots 5, 8, 9, 10, 11 and 12, Blk. 1, Davenport Tract	.64	$ 35,000	48,600
Hancock Street Barn	Lots 1, 2, 7 and 8, Blk. 251, Holladay's Add	45	15,000	7,500
Brooklyn Barn	Powell and Milwaukie Sts	.50	5,000	40,000
	Total, Bureau of Street Cleaning		$ 55,000	$ 96,100
	BUREAU OF WATER WORKS			
Bull Run Pipe Line and Service Mains				11,500,000.00
Old reservoir site	All of Blk. 32, Caruthers' Add., Broadway and Lincoln Sts	.92	100,000	1,000
Portland Heights reservoir site	Blk. "K," Greenway Add	.51	5,000	11,114
Repair and meter shop	S. E. ¼ of Blk. 150, Portland, Fourth and Market Sts	.25	125,000	1,000
East Side Water Office	Lot 8, Blk. 139, East Portland, E. 7th and E. Alder Sts	.11	8,500	23,415
Site of old Irvington standpipe	Lots 5 and 6, Blk. 257, Holladay Add., E. 13th and Schuyler Sts	.22	4,500	
Former pumping station	Tract foot of Sherman St	.50	12,000	
Bull Run conduits No. 1 and 2	Tract foot of Stephens St	.60	7,500	
Reservoirs No. 3 and 4	Adjoining Washington Park	63.10	189,000	569,000
Water tanks	Portland Heights	.04	600	
Water tanks	Willamette Heights	.06	500	2,500
Albina warehouse	Blk. 73, Albina, Randolph and Loring Str	1.00	40,000	5,000
Albina Water Office, shop and stable	Part of Blk. 25 and 26, Albina, Russell St., between Williams Ave. and Rodney Ave	.29	7,000	32,310
Old Highland tank site	Lot 4, Blk. 6, Maegley Highland, Union Ave., between Wygant and Going Sts	.10	2,500	
Old tank site, Brown's system	E. Sixtieth St. and Foster Road	.08	700	
Old tank site, Brown's system	Lot 1, Blk. 1, Pomona Add	.08	300	
Old tank site, Brown's system	Lot in School Park Add	.01	50	

OFFICE OF CITY AUDITOR—INVENTORY OF CITY PROPERTY—REAL PROPERTY—Continued

Name	Location	Area in Acres	Value of Land	Value of Improvements
Old tank site, Brown's system	Lot 5, Blk. 22, Saginaw Heights	.10	300	30
Vernon standpipe	Tract E. Twentieth and Prescott Sts.	2.34	11,000	12,000
Palatine pump station	Tract near Rivera, Multnomah County	21.00	60,000	10,000
High service reservoir No. 1	Mt. Tabor	5.75	28,000	134,000
Low service reservoir No. 2	Mt. Tabor	10.00	50,000	121,000
Reservoirs No. 5 and 6	Mt. Tabor	45.17	150,000	690,000
Standpipe	Lear Lusted's	.50	100	
Headworks	Clackamas and Multnomah Counties	4360.00	150,400	16,597
Standpipe	Council Crest	.25	900	2,200
Pump station	Old Kinzel Park pump station, East 76th and Yamhill Sts	1.00	2,000	200
Tract for water tanks	Extension 19th St. 100 ft. S. of Spring St	.025	500	
King's Heights reservoir	Lots 1 and 2, Blk. 21, King's Heights	Easemt		7,671
Burlingame standpipe	Lots 3 and 4, Blk. 32, Burlingame	"		16,057
Tabor Heights tank	North slope, Mt. Tabor	Bu. of Parks		7,105
South Portland tank	Bancroft and West Sts	In street		2,500
	LINNTON—Annexed July 7th, 1915			
Reservoir No. 1	Third and F Sts	In street		3,102
Reservoir No. 2	S. 60 ft. Lots 32 and 33, Blk. 20, First Addition to Linnton	Acres .07	150	2,890
Reservoir No. 3	Lower Whitwood	.25	500	2,890
Reservoir No. 4	Upper Whitwood	.25	500	3,102
Reservoir No. 6	Frac. Lot 8, Blk. 28, Willalatin Park	.25	500	2,890
Reservoir No. 7	Lower Willbridge	.22	475	3,102
Reservoir No. 8	Upper Willbridge	.13	280	1,440
Whitwood Court pump	Lot 1, Blk. 24, Whitwood Court	.34	1,475	212
	Total, Bureau of Water Works		$ 960,230	13,184,327.93
	BUREAU OF GARBAGE DISPOSAL			
Crematory	North of St.Helens Road in Poole Tract	4.98	$ 55,000	$ 99,900
	BUREAU OF HIGHWAYS AND BRIDGES			
Morrison St. Bridge				$ 385,384
Burnside St. Bridge				300,000
Hawthorne Ave. Bridge				511,216
Broadway Bridge				1,586,922
Front St. Bridge				69,071
First St. Bridge				59,386
Thurman St. Bridge				35,000
Grand Ave. Bridge				63,501
Union Ave. Bridge				63,317
E. Twelfth St. Bridge				64,872
East Twenty-first St. Bridge				67,000
East Twenty-eighth St. Bridge				84,400
Various wood trestle bridges				10,000
Albina Ferry Boat				10,000
Albina Ferry Boat (new)				17,500
Sellwood Ferry Boat				9,500
Total				$ 3,337,069

OFFICE OF CITY AUDITOR—INVENTORY OF CITY PROPERTY—REAL PROPERTY—Continued

Name	Location	Area in Acres	Value of Land	Value of Improvements
	DEPARTMENT OF PUBLIC DOCKS			
Dock No. 1	N. 75 ft. of Lot 14, all Lots 15, 16, 17, 18, 19 and 20, Watson's Add., and Lots 21, 22, 23, 24, and 25, River Block 2, Doscher's Add., except N. 60 ft. of Lot 21 and S. 5 ft. of Lot 22, Doscher's Add	12.93	$970,869.97	$ 570,666.34
Dock No. 2	Blks. 1 and 2, E. Portland	3.12	350,975.00	277,074.23
Dock No. 3	River lots 3, 4, 5, 6, James John's Add.	1.50	40,000.00	19,500.00
Public Levee	Foot of Jefferson St.	1.50	100,000.00	.....
Boat landing	Foot of Stark St.	.....	.....	29,390.19
Richmond St. Dock	Foot of Richmond St., St. Johns	.....	.....	500.00
	Total, Department of Public Docks.	.....	1461,844.97	897,130.76

SUMMARY OF REAL AND PERSONAL PROPERTY OWNED BY THE CITY OF PORTLAND, OREGON

RESOURCES	Personal	Real Estate and Improvements
Mayor's Office	$ 897.05	$.....
Bureau of Fire	565,979.68	630,230.00
Bureau of Police	15,580.49	494,100.00
Bureau of Health	6,325.33	5,193.00
Bureau of Pound	1,445.55	.....
Municipal Court	352.08	.....
Moving Picture Censor	23.96	.....
Public Defender	182.28	.....
Harbor Master	5,002.24	.....
Office of Commissioner of Public Affairs	458.45	.....
Bureau of City Hall	5,352.45	600,000.00
Office of City Attorney	5,180.60	.....
Bureau of Parks	19,499.22	3,915,000.00
Bureau of Public Employment	129.95	.....
Bureau of Weights and Measures	1,338.75	.....
Municipal Reference Library	251.00	.....
Public Auditorium	.....	130,000.00
Free Museum	55,430.00	.....
Office of Commissioner of Finance	400.47	.....
Office of City Treasurer	4,359.90	.....
Bureau of Purchases	1,038.10	.....
Municipal Shop	3,753.69	.....
Municipal Store	8,944.35	.....
Municipal Garage	975.63	.....
Public Markets	76.00	.....
Stationery Stock	3,795.13	.....
Bureau of Licenses	85.00	.....
Office of Commissioner of Public Utilities	604.60	.....
Bureau of Street Cleaning	74,306.13	151,100.00
Bureau of Garbage Disposal	2,222.12	154,900.00
Bureau of Water Works	227,196.85	14,144,557.93
Office of Commissioner of Public Works	606.61	.....
Main Office	4,022.92	.....
Division of Highways and Bridges	13,025.77	3,337,069.00
Division of Sewers	9,213.91	.....
Division of Surveys and Drafting	5,981.74	.....
Division of Buildings	1,764.75	.....
Division of Standards	7,318.20	.....
Division of City Engineer	578.50	.....
New Albina Ferry Approaches	.....	57,000.00
Civil Service Board	768.50	.....
Commission of Public Docks	23,243.87	2,358,975.73
Office of Auditor	5,093.80	
Street Improvement Warrants surrendered to the City for General Fund Warrants by authority of the Council, face value	83,619.04	.....
Street Improvement and Sewer Warrants drawn in favor of the City, to cover the cost of engineering and advertising value	70,144.55	.....
Cash balances in all funds, except Trust Funds and Special Assessment Funds	1,084,089.29	.....
Sinking Fund Investments:		
Water Bond Sinking Fund	843,000.00	.....
Sinking Fund	616,024.78	.....
Bonded Indebtedness Sinking Fund	3,000.00	.....
Public Docks Sinking Fund	100,200.00	.....
Total	$ 3,882,883.28	$25,978,125.66
		3,882,883.28
Grand Total	.....	$29,861,008.94

SUMMARY OF REAL AND PERSONAL PROPERTY OWNED BY THE CITY OF PORTLAND, OREGON—Continued

LIABILITIES	Personal	Real Estate and Improvements
Bonded Debt	$17,079,300.00	$.....
Interest Coupons due December 1, 1915	50,305.00	.....
Bonds due December 1, 1915	5,800.00	.....
Interest Coupons Outstanding November 30, 1915	4,650.00	.....
Amount of Claims Payable Account of 1915	101,436.50	.....
Warrants Outstanding Account of 1915	211,756.13	.....
To Balance	12,407,761.31	29,861,008.94

BUREAU OF WATER WORKS

Balance December 1, 1914	64,295.61	$.....
*Receipts During 1915	1,311,336.99	1,375,632.60
Disbursements During 1915	$ 1,238,299.42	$.....
Balance November 30, 1915	137,333.18	1,375,632.60
Value of Water System	.....	$14,371,754.78

*Included in this amount is $560,800 received from sale of bonds.

PORTLAND RAILWAY LIGHT & POWER COMPANY GENERAL BALANCE SHEET DECEMBER 30, 1914

Debit	CAPITAL ACCOUNT	Credit
Stocks and Bonds of other Companies owned by Respondent (give detail) ..... $ 403,000.00		Capital Stock ..... $18,750,000.00 Funded Debt 39,964,000.00

Debit	ASSETS AND LIABILITIES		Credit	
Cash	$	78,300.78	Loans and Bills Payable.	$ 396,877.23
Bills Receivable		214,927.91	Audited Vouchers and Accounts	98,885.46
Accounts Receivable		558,071.94	Employees Funds	20,245.77
Due from Agents		2,500.00	Consumers' Deposits	14,591.31
*Road		59,611,643.28	Tickets Outstanding	24,675.93
Materials and Supplies ...		497,579.55	Advance Collections	2,271.06
Other Assets (give detail)		488,173.57	Paving Assessments	1,114,841.91
Prepaid Accounts		35,724.45	Interest	501,117.19
Cash in hands of Trustees		69,568.71	Taxes Accrued	256,074.44
Sinking Fund Investment		350,565.81	Accrued Maint. & Depn..	621,239.15
			Miscellaneous	64,987.51

*This item to be changed to conform to purpose for which franchise is granted.

Debit	INCOME ACCOUNT		Credit	
Operating Expenses	$	606,638.81	Operating Revenue	$ 1,509,742.76
Taxes		154,001.53		
Bridge Rents		10,854.17		
Interest on Bonds		510,621.77		
Interest on St. Imp. Bonds		15,770.59		
Interest on Notes		8,109.47		
Bond Discount		4,598.13		

Debit	PROFIT AND LOSS		Credit	
Amount Charged off for Depreciation	$	118,665.17	Balance Sept. 30, 1914	$ 434,434.38
			Balance from Income Account	199,148.29
			Adjustments	34,344.85
			Surplus	480,572.65

PORTLAND RAILWAY LIGHT & POWER COMPANY GENERAL BALANCE SHEET MARCH 31, 1915

Debit	CAPITAL ACCOUNT	Credit
Stocks and Bonds of other Companies owned by Respondent ..... $ 403,740.81	Capital Stock ..... $18,750,000.00 Funded Debt 39,964,000.00	

Debit	ASSETS AND LIABILITIES	Credit
Cash ..... $ 42,257.67	Loans and Bills Payable. $ 476,587.43	
Bills Receivable 217,375.87	Audited Vouchers and Accounts 145,374.64	
Accounts Receivable 711,296.37	Employees' Funds 2,004.83	
Due from Agents 2,500.00	Consumers' Deposits 14,271.53	
*Road 50,653,439.28	Tickets Outstanding 17,692.34	
Materials and Supplies ... 493,799.34	Advance Collections 2,484.31	
Other Assets (give detail) 472,284.18	Unpaid Taxes (give details) 252,295.36	
Prepaid Accounts 118,680.36	Paving Assessment 1,110,216.26	
Cash in Hands of Trustees 3,727.88	Interest Accrued 565,078.74	
Sinking Fund Investment 416,189.56	Taxes Accrued 721.13	
	Accrued Maintenance and Depreciation Reserve ... 619,914.83	
	Accrued Depreciation on Equipment 90,000.00	
	Miscellaneous 61,110.32	

*This item to be changed to conform to purpose for which franchise is granted.

Debit	INCOME ACCOUNT	Credit
Operating Expenses ..... $ 607,177.11	Operating Revenue ..... $ 1,361,566.35	
Taxes 156,285.56		
Bridge Rentals 11,012.08		
Interest on Bonds 509,304.21		
Interest on Street Improvement Bonds 16,122.67		
Interest on Notes 7,729.94		
Bond Discount 4,598.13		

Debit	PROFIT AND LOSS	Credit
Amount Charged off for Depreciation ..... $ 90,306.84	Balance Dec. 31, 1914 .... $ 480,572.65	
	Balance from Income Account 49,336.65	
	Adjustment 7,445.40	
	Surplus 447,047.86	

PORTLAND RAILWAY LIGHT & POWER COMPANY GENERAL BALANCE SHEET JUNE 30, 1915

Debit	CAPITAL ACCOUNT		Credit	
Stocks and Bonds of other Companies owned by Respondent (give detail)	$	403,743.81	Capital Stock	$18,750,000.00
Funded Debt Owned		671,464.41	Funded Debt	39,964,000.00
			Stock Subscriptions	1,049,150.00

Debit	ASSETS AND LIABILITIES		Credit	
Cash	$	861,677.24	Loans and Bills Payable	$ 335,000.00
Bills Receivable		220,148.34	Audited Vouchers and Accounts	134,873.77
Accounts Receivable		692,681.81	Customers' Deposits	12,920.85
Due from Agents		4,000.00	Employees' Funds	19,756.59
*Road		59,305,538.93	Tickets Outstanding	16,399.29
Material and Supplies		482,152.92	Advance Collections	2,166.64
Other Assets (give detail)		669,105.67	Paving Assessments	1,057,376.41
Prepaid Accounts		92,836.76	Unpaid Taxes	252,295.36
Cash in Hands of Trustees		5,063.91	Maintenance and Depreciation Reserve	648,997.82
			Depreciation Road and Equipment	120,000.00
			Interest Accrued	499,567.68
			Taxes Accrued	89,684.23
			Miscellaneous	44,072.63

*This item to be changed to conform to purpose for which franchise is granted.

Debit	INCOME ACCOUNT		Credit	
Operating Expense	$	624,579.80	Operating Revenue	$ 1,353,365.66
Taxes		124,208.53		
Interest on Funded Debt		514,272.03		
Interest on Floating Debt		8,886.05		
Interest on Street Improvement Bonds		17,160.82		
Bridge Rentals		12,097.17		
Bond Discount		4,598.13		

Debit	PROFIT AND LOSS		Credit	
Amount charged off for Depreciation	$	80,652.49	Balance March 31, 1915	$ 447,047.86
			Balance from Income Account	47,563.13
			Adjustments	1,805.97
			Surplus	412,152.53

PORTLAND RAILWAY LIGHT & POWER COMPANY GENERAL BALANCE SHEET SEPTEMBER 30, 1915

Debit	CAPITAL ACCOUNT	Credit
Stocks and Bonds of other Companies owned by Respondent (give detail) ..... $ 425,813.91		Capital Stock $18,750,000.00
Funded Debt Owned 593,447.06		Funded Debt 38,887,000.00
		Stock Subscription 1,250,000.00

Debit	ASSETS AND LIABILITIES	Credit
Cash ..... $ 630,300.56		Audited Vouchers and Accounts ..... $ 143,004.96
Bills Receivable 222,949.29		Paving Assessments 1,031,117.24
Accounts Receivable 709,242.76		Employees' Funds 19,457.45
Due from Agents 4,000.00		Customers' Deposits 17,744.84
*Road (Plant Account) .. 59,309,969.38		Tickets Outstanding 18,281.66
Material and Supplies ... 530,875.19		Advance Collections 2,294.94
Other Assets (give detail) 626,988.18		Interest Accrued 564,248.39
Prepaid Accounts 63,811.89		Taxes Accrued 183,880.23
Cash in Hands of Trustees . 10,493.91		Maintenance and Depreciation Reserve 703,362.27
		Depreciation of Road and Equipment 150,000.00
		Miscellaneous 52,123.06

*This item to be changed to conform to purpose for which franchise is granted.

Debit	INCOME ACCOUNT	Credit
Operating Expenses ..... $ 640,725.31		Operating Revenue ..... $ 1,373,266.82
Taxes 125,625.59		
Bridge Rental 12,365.68		
Bond Discount 4,583.91		
Interest on Funded Debt. 521,618.18		
Interest on Floating Debt 771.49		
Interest on Street Improvement Bonds 15,280.54		

Debit	PROFIT AND LOSS	Credit
Amount charged off for Depreciation ..... $ 91,092.91		Balance June 30, 1915 .... $ 412,152.53
		Balance from Income Account 52,296.12
		Adjustments 17,978.65
		Surplus 355,377.09

PACIFIC TELEPHONE & TELEGRAPH COMPANY GENERAL BALANCE SHEET DECEMBER 31, 1914

Debit	CAPITAL ACCOUNT	Credit
Stocks and Bonds of other Companies owned by Respondent (give detail) ..... $ 883,451.64		Capital Stock..... $50,000,000.00
Intangible Capital..... 14,154,872.79		Funded Debt..... 41,375,000.00
Miscellaneous Investments 333,578.83		

Debit	ASSETS AND LIABILITIES	Credit
Cash and Deposits..... $ 1,366,072.65		Loans and Bills Payable. $ 3,600,000.00
Bills Receivable..... 2,766,516.15		Audited Vouchers and Accounts 471,075.28
Accounts Receivable—Due from Agents 4,376,114.74		Wages and Salaries..... 371,893.68
*Construction 73,492,844.39		Other Liabilities (give detail) 816,285.87
General Eqipment 669,371.63		Taxes $313,664.87
Materials and Supplies.. 1,195,255.22		Interest 12,500.00
Real Estate..... 6,446,204.91		Dividends Payable 480,000.00
Franchise 4,055.20		Income Tax Collections .. 784.62
Sinking Fund..... 218,781.87		Tax on Tax-Exempt Bonds 4,975.13
Prepayments 139,737.14		Federal Revenue Tax 4,361.25
Unamortized Debt Discount and Expense..... 2,173,114.69		Insurance and Casualty Reserve 50,000.00
		Liability for Emp. Ben. Fund 500,000.00
		Reserve for Accrued Depreciation 10,402,683.41

*This item to be changed to conform to purpose for which franchise is granted.

Debit	INCOME ACCOUNT	Credit
Operating Expenses..... $12,859,076.44		Operating Revenue..... $18,477,757.18
Uncollectible Revenues... 197,702.32		Dividends on Stocks Owned 775.00
Taxes Accrued..... 856,268.59		Interest on Funded Debts Owned 33,701.02
Miscellaneous Rents..... 288,128.89		Interest on Securities, Loans and Accounts.... 186,017.15
Interest 2,189,130.71		Non-Operating Revenues. 19,056.23
Amortization of Debt Discount and Expense. 98,950.98		
Misc. Deductions from Income 7,807.94		
Dividend Appropriations of Income..... 1,920,000.00		

Debit	PROFIT AND LOSS	Credit
Other Deductions from Surplus ..... $ 15,727.62		Balance Jan. 1, 1914..... $ 348,520.52
Balance Dec. 31, 1914.... 633,033.61		Balance from Income Account 300,240.71

PACIFIC TELEPHONE & TELEGRAPH COMPANY GENERAL BALANCE SHEET MARCH 31, 1915

Debit	CAPITAL ACCOUNT	Credit
Stocks and Bonds of other Companies owned by Respondent (give detail) ..... $ 3,761,989.30		Capital Stock $50,000,000.00
Intangible Capital $14,154,872.00		Funded Debt $41,136,000.00
Miscellaneous Investments 333,578.83		

Debit	ASSETS AND LIABILITIES		Credit	
Cash and Deposits ..... $	936,585.15	Loans and Bills Payable .. $		3,600,000.00
Bills Receivable	2,766,563.06	Audited Vouchers and Accounts		529,127.46
Accounts Receivable—Due from Agents	4,783,242.43	Wages and Salaries		371,100.15
*Construction	71,354,415.56	Other Liabilities (give detail)		1,028,088.18
General Equipment	650,742.35	Interest $525,368.61		
Materials and Supplies ...	1,126,630.94	Dividends Payable 480,000.00		
Real Estate	5,942,289.06	Income Tax Collections 776.70		
Franchise	4,055.20	Tax on Tax-Exempt Bonds 6,330.13		
Sinking Fund	208.13	Federal Revenue Tax 6,123.74		
Prepayments	283,852.66	Employee's Stock Purchase Receipts 9,489.00		
Unamortized Debt Discount and Expense	2,133,607.77	Insurance and Casualty Reserve		50,000.00
		Liability for Emp. Ben. Fund		495,579.68
		Reserve for Accrued Depreciation		10,369,301.81
		Other Deferred Credit Items		10,589.30

*This item to be changed to conform to purpose for which franchise is granted.

Debit	INCOME ACCOUNT	Credit
Operating Expenses ..... $	3,227,636.18	Operating Revenue ..... $ 4,607,274.42
Uncollectible Revenues ...	52,965.42	Dividends on Stocks Owned 184.00
Taxes Accrued	220,013.15	Interest on Funded Debts Owned 43,791.16
Miscellaneous Rents	56,796.78	Interest on Securities, Loans and Accounts 43,665.89
Interest	616,272.62	Non-Operating Revenues . 7,961.42
Amortization of Debt Discount and Expense ..	25,309.16	
Misc. Deductions from Income	3,973.12	
Dividend Appropriations of Income	480,000.00	

Debit	PROFIT AND LOSS	Credit
Other Deductions from Surplus ..... $	10,097.41	Balance ..... $ 633,033.61
		Balance from Income Account 19,910.45

PACIFIC TELEPHONE & TELEGRAPH COMPANY GENERAL BALANCE SHEET JUNE 30, 1915

Debit	CAPITAL ACCOUNT	Credit
Stocks and Bonds of other Companies owned by Respondent (give detail) ..... $ 3,767,989.30		Capital Stock $50,000,000.00
Intangible Capital 14,154,872.79		Funded Debt 41,136,000.00
Miscellaneous Investments 333,864.26		

Debit	ASSETS AND LIABILITIES	Credit
Cash and Deposits ..... $ 886,074.29		Loans and Bills Payable. $ 3,600.000.00
Bills Receivable 2,764,868.84		Audited Vouchers and Accounts 446.245.18
Accounts Receivable—Due from Agents 4,267,878.47		Wages and Salaries 362,207.90
*Construction 71,879,048.97		Other Liabilities (give detail) 662,954.36
General Equipment 666,444.09		Taxes $150,866.49
Material and Suplies 1,099,403.79		Interest 12,500.00
Real Estate 5,936,781.67		Dividends Payable 480,000.00
Franchise 4,455.20		Income Tax Collections 244.80
Sinking Fund 208.13		Tax on Tax-Exempt Bonds 1,410.00
Prepayments 219,037.20		Federal Revenue Tax 7,917.49
Unamortized Debt Discount and Expense 2,108,989.23		Employes' Stock Purchase Receipts 10,015.58
		Insurance and Casualty Reserve 50,000.00
		Liability for Emp. Benefit Fund 502,481.49
		Reserve for Accrued Depreciation 10,629,964.74
		Other Deferred Credit Items 2,611.99

*This item to be changed to conform to purpose for which franchise is granted.

Debit	INCOME ACCOUNT	Credit
Operating Expenses ..... $ 6,545,991.27		Operating Revenue ..... $ 9,298,647.19
Uncollectible 104,666.51		Dividends on Stocks Owned 1,991.00
Taxes Accrued 444,370.17		Interest on Funded Debts Owned 96,543.45
Miscellaneous Rents 115,649.08		Interest on Securities, Loans and Accounts... 81,860.09
Interest 1,192,249.39		Non-Operating Revenue .. 15,722.13
Amortization of Debt Discount and Expense.. 49,927.70		
Misc. Deductions from Income 4,078.37		
Dividend Appropriations of Income 960,000.00		

Debit	PROFIT AND LOSS	Credit
Other Deductions from Surplus ..... $ 13,414.41		Balance ..... $ 633,033.61
		Balance from Income Account 77,831.37

PACIFIC TELEPHONE & TELEGRAPH COMPANY GENERAL BALANCE SHEET SEPTEMBER 30, 1915

Debit	CAPITAL ACCOUNT	Credit
Stocks and Bonds of other Companies owned by Respondent (give detail)	$ 3,806,081.47	Capital Stock	$50,000,000.00
Intangible Capital	14,154,872.79	Funded Debt	41,112,000.00
Miscellaneous Investments	333,864.26		

Debit	ASSETS AND LIABILITIES	Credit	
Cash and Deposits	$ 1,296,236.79	Loans and Bills Payable	$ 3,600,000.00
Bills Receivable	2,730,871.56	Audited Vouchers and Accounts	445,142.32
Accounts Receivable	4,373,318.12	Wages and Salaries	358,031.50
*Construction	72,426,537.63	Other Liabilities (give detail)	1,133,210.50
Equipment	671,267.10	Taxes	$107,268.28
Material and Supplies	992,995.68	Interest	524,542.91
Real Estate	5,942,242.11	Dividends Payable	480,000.00
Franchise	4,680.20	Income Tax Collections	693.93
Sinking Fund	145.21	Tax on Tax-Exempt Bonds	2,825.75
Prepayments	194,602.62	Federal Revenue Tax	8,459.85
Unamortized Debt Discount and Expense	2,082,983.71	Employes' Stock Purchase Receipts	9,419.78
		Insurance and Casualty Reserve	50,000.00
		Liability for Emp. Benefit Fund	501,696.86
		Reserve for Accrued Depreciation	11,031,599.82
		Other Deferred Credit Items	13,051.29

*This item to be changed to conform to purpose for which franchise is granted.

Debit	INCOME ACCOUNT	Credit	
Operating Expenses	$10,015,371.45	Operating Revenue	$14,197,034.72
Uncollectible	160,717.97	Dividends on Stock Owned	2,175.00
Taxes Accrued	692,937.04	Interest on Funded Debts Owned	134,398.67
Miscellaneous Rents	173,530.84	Interest on Securities, Loans and Accounts	126,333.95
Interest	1,770,814.08	Non-Operating Revenue	23,372.14
Amortization of Debt Discount and Expense	74,456.93		
Misc. Deductions from Income	8,068.37		
Dividend Appropriations of Income	1,440,000.00		

Debit	PROFIT AND LOSS	Credit	
Other Deductions from Surplus	$ 14,484.45	Balance	$ 633,033.61
		Balance from Income Account	147,417.80

HOME TELEPHONE & TELEGRAPH COMPANY OF PORTLAND, OREGON, GENERAL BALANCE SHEET DECEMBER 31, 1914

Debit	CAPITAL ACCOUNT		Credit	
Stocks and Bonds of other Companies owned by Respondent (give detail)—Albany, Corvallis, Oregon City, Independence	$ 148,475.00	Capital Stock	$ 3,000,000.00	
Funded Debt Owned	1,252,200.00	Funded Debt	$ 4,000,000.00	
Stock in Treasury	325,291.67			
To Balance	5,274,033.33			
	$ 7,000,000.00			$ 7,000,000.00

Debit	ASSETS AND LIABILITIES		Credit	
Cash	$ 30,758.95	Loans and Bills Payable	$ 100,000.00	
Bills Receivable	5,106.16	Audited Vouchers and Accounts	13,460.00	
Accounts Receivable	22,414.50	Wages and Salaries	7,647.55	
*Plant, Equipment, Etc.	5,661,259.48	Unclaimed Dividends	1,513.50	
Materials and Supplies	78,567.40	Accrued Bond Interest	32,637.50	
Other Assets (give detail)—Bonds purchased	11,385.00	1914 Taxes, Mult. County	17,013.78	
		1914 City of Portland Franchise Tax	3,378.93	
		To Balance	5,633,839.31	
	$ 5,809,491.49			$ 5,809,491.49

*This item to be changed to conform to purpose for which franchise is granted.

Debit	INCOME ACCOUNT		Credit	
Operating Expenses	$ 34,634.22	Operating Revenue	$ 82,746.01	
Taxes Accrued	1,123.85			
Other Interest	1,383.33			
Bond Interest Accrued	34,093.54			
To Balance	11,511.07			
	$ 82,746.01			$ 82,746.01

Debit	PROFIT AND LOSS		Credit	
To Balance	$ 359,805.98	Balance Oct. 1, 1914	$ 348,294.91	
		Balance from Income Account 3 months	11,511.07	
	$ 359,805.98			$ 359,805.98
		By Bal. Dec. 31, 1914	$ 359,805.98	

HOME TELEPHONE & TELEGRAPH COMPANY OF PORTLAND, OREGON, GENERAL BALANCE SHEET MARCH 31, 1915

Debit	CAPITAL ACCOUNT		Credit	
Stocks and Bonds of other Companies owned by Respondent (give detail)—Albany, Corvallis, Oregon City, Independence	$ 148,500.00	Capital Stock	$ 3,000,000.00	
Funded Debt Owned	1,250,200.00	Funded Debt	$ 4,000,000.00	
Stock in Treasury	325,291.67			
To Balance	5,276,008.33			
	$ 7,000,000.00		$ 7,000,000.00	

Debit	ASSETS AND LIABILITIES		Credit	
Cash	$ 51,903.26	Loans and Bills Payable	$ 100,000.00	
Bills Receivable	4,032.85	Audited Vouchers and Accounts	8,340.45	
Accounts Receivable	24,419.22	Wages and Salaries	7,248.50	
*Plant, Equipment, Etc.	5,663,798.36	Unclaimed Dividends	1,393.50	
Material and Supplies	82,943.62	Accrued Bond Interest	63,333.52	
Other Assets (give detail)—Bonds purchased	11,385.00	Half of 1914 Taxes, Mult. County	8,506.89	
		Three mos. of 1915 Taxes, Mult. County (Est.)	5,574.92	
		By Balance	5,644,084.53	
	$ 5,838,482.31		$ 5,838,482.31	

*This item to be changed to conform to purpose for which franchise is granted.

Debit	INCOME ACCOUNT		Credit	
Operating Expense	$ 30,528.04	Operating Revenue Jan. 1, 1915, to Mar. 31, 1915	$ 80,329.10	
Taxes Accrued 3 months (estimated)	5,880.00			
Other Interest	1,500.00			
Bond Int. Accrued	34,150.84			
To Balance	8,270.22			
	$ 80,329.10		$ 80,329.10	

Debit	PROFIT AND LOSS		Credit	
To Balance	$ 368,076.20	Balance Jan. 1, 1915	$ 359,805.98	
		Balance from Income Account 3 mos.	8,270.22	
			$ 368,076.20	
	$ 368,076.20	By Balance Mar. 31, 1915	$ 368,076.20	

HOME TELEPHONE & TELEGRAPH COMPANY OF PORTLAND, OREGON, GENERAL BALANCE SHEET JUNE 30, 1915

Debit	CAPITAL ACCOUNT		Credit	
Stocks and Bonds of other Companies owned by Respondent (give detail)—Albany, Corvallis, Oregon City, Independence	$ 148,575.00	Capital Stock	$ 3,000,000.00	
Funded Debt Owned	1,250,200.00	Funded Debt	$ 4,000,000.00	
Stock in Treasury	325,291.67			
To Balance	5,275,933.33			
	$ 7,000,000.00			$ 7,000,000.00

Debit	ASSETS AND LIABILITIES		Credit	
Cash	$ 24,917.25	Loans and Bills Payable	$ 100,000.00	
Bills Receivable	4,080.60	Audited Vouchers and Accounts	9,662.20	
Accounts Receivable	22,716.71	Wages and Salaries	6,783.40	
*Plant, Equipment, Etc.	5,665,191.79	Unclaimed Dividends	1,153.50	
Material and Supplies	89,945.50	Accrued Bond Interest	29,880.33	
Other Assets (give detail)—Bonds purchased	11,385.00	Half of 1914 Taxes Mult. County	8,506.89	
		Six mos. of 1915 Taxes (Estimated)	11,204.92	
		By Balance	5,651,045.61	
	$ 5,818,236.85			$ 5,818,236.85

*This item to be changed to conform to purpose for which franchise is granted.

Debit	INCOME ACCOUNT		Credit	
Operating Expenses	$ 29,293.65	Operating Revenue April 1, 1915, to June 30, 1915	$ 77,839.74	
Taxes Accrued 3 months (Estimated)	5,880.00			
Other Interest	1,500.00			
Bond Interest Accrued	34,130.01			
To Balance	7,036.08			
	$ 77,839.74			$ 77,839.74

Debit	PROFIT AND LOSS		Credit	
To Balance	$ 375,112.28	Balance April 1, 1915	$ 386,076.20	
		Balance from Income Account, 3 months	7,036.08	
	$ 375,112.28			$ 375,112.28
		By Balance June 30, 1915	$ 375,112.28	

HOME TELEPHONE & TELEGRAPH COMPANY OF PORTLAND, OREGON, GENERAL BALANCE SHEET SEPTEMBER 30, 1915

Debit	CAPITAL ACCOUNT		Credit
Stocks and Bonds of other Companies owned by Respondent (give detail)—Albany, Corvallis, Oregon City, Independence	$ 148,600.00	Capital Stock	$ 3,000,000.00
Funded Debt Owned	1,249,200.00	Funded Debt	$ 4,000,000.00
Stock in Treasury	325,291.67		
To Balance	5,276,908.33		
	$ 7,000,000.00		$ 7,000,000.00

Debit	ASSETS AND LIABILITIES		Credit
Cash	$ 50,405.42	Loans and Bills Payable	$ 100,000.00
Bills Receivable	4,080.60	Audited Vouchers and Accounts	6,709.49
Accounts Receivable	23,971.73	Wages and Salaries	6,742.35
*Plant, Equipment, etc.	5,666,486.42	Unclaimed Dividends	1,102.50
Material and Supplies	94,860.43	Accrued Bond Interest	63,375.75
Other Assets (give detail) —Bonds purchased	11,385.00	Taxes 9 mos. of 1915, Est.	17,034.92
		By Balance	5,656,224.59
	$ 5,851,189.60		$ 5,851,189.60

*This item to be changed to conform to purpose for which franchise is granted.

Debit	INCOME ACCOUNT		Credit
Operating Expenses	$ 28,276.25	Operating Revenue July 1, 1915, to Sept. 30, 1915	$ 74,013.15
Taxes Accrued 3 mos., est.	5,880.00		
Other Interest	1,500.00		
Bond Interest Accrued	34,152.92		
To Balance	4,203.98		
	$ 74,013.15		$ 74,013.15

Debit	PROFIT AND LOSS		Credit
To Balance	$ 379,316.26	Balance July 1, 1915	$ 375,112.28
		Balance from Income Account, 3 mos	4,203.98
	$ 379,316.26		$ 379,316.26
		By Bal Sept. 30, 1915	$ 379,316.26

PORTLAND GAS AND COKE COMPANY GENERAL BALANCE SHEET DECEMBER 31, 1914

Debit	CAPITAL ACCOUNT		Credit	
Stocks and Bonds of other Companies owned by Respondent (give detail)	$	126,401.00	Capital Stock	$ 5,000,000.00
			Funded Debt	5,888,000.00

Debit	ASSETS AND LIABILITIES		Credit	
Cash	$	7,945.94	Audited Vouchers and Accounts	$ 63,919.82
Bills Receivable		31,093.83	Wages and Salaries	11,630.66
Accounts Receivable		391,732.51	Other Liabilities (give detail)	57,465.70
Equipment		8,006,306.29	Accrued Accounts	239,405.19
Materials and Supplies		139,504.27	Consumers' Deposits	25,729.85
Other Assets (give detail)		2,665,063.39	Reserve Accounts	376,358.59
Prepaid Accounts		224,098.23		
Undistributed Plant Items		170,364.35		

Debit	INCOME ACCOUNT		Credit	
Operating Expenses	$	544,950.40	Operating Revenue	$ 1,301,700.89
Taxes Accrued		94,255.59	Sundry Interest	20,895.12
Interest on Funded Debt.		297,097.47		
Dividends		350,000.00		

Debit	PROFIT AND LOSS		Credit	
Misc. Deductions from Surplus	$	9,562.06	Balance Jan. 1, 1914	$ 116,177.83
Amount charged off for Depreciation		42,908.32	Balance from Income Account	36,292.55
Balance Dec. 31, 1914		100,000.00		
	$	152,470.38		$ 152,470.38

PORTLAND GAS AND COKE COMPANY GENERAL BALANCE SHEET MARCH 31, 1915

Debit	CAPITAL ACCOUNT		Credit	
Stocks and Bonds of other Companies owned by Respondent (give detail)	$	126,401.00	Capital Stock	$ 5,000,000.00
			Funded Debt	$ 5,963,000.00

Debit	ASSETS AND LIABILITIES		Credit	
Cash	$	23,101.76	Audited Vouchers and Accounts	$ 86,075.00
Bills Receivable		31,184.13	Wages and Salaries	12,321.95
Accounts Receivable		238,364.54	Other Liabilities (give detail)	57,465.70
Equipment		8,105,437.83	Accrued Accounts	94,654.29
Materials and Supplies		101,809.20	Consumers' Deposits	26,046.70
Other Assets (give detail)		2,669,873.84	Reserve Accounts	369,172.60
Prepaid Accounts		230,962.43		
Undistributed Plant Items		177,697.71		

Debit	INCOME ACCOUNT		Credit	
Operating Expenses	$	142,107.59	Operating Revenue	$ 326,560.63
Taxes Accrued		28,106.49	Sundry Interest	4,141.10
Interest on Funded Debt.		76,411.18		
Dividends		87,500.00		

Debit	PROFIT AND LOSS		Credit	
Misc. Deductions from Surplus	$	480.27	Balance	$ 100,000.00
Balance from Income Account		3,423.53		
Balance March 31, 1915		96,096.20		
	$	100,000.00		$ 100,000.00

PORTLAND GAS AND COKE COMPANY GENERAL BALANCE SHEET
JUNE 30, 1915

Debit	CAPITAL ACCOUNT		Credit	
Stocks and Bonds of other Companies owned by Respondent (give detail)	$	126,401.00	Capital Stock	$ 5,000,000.00
			Funded Debt	6,038,000.00
Debit	**ASSETS AND LIABILITIES**		**Credit**	
Cash	$	3,178.34	Audited Vouchers and Accounts	$ 82,355.68
Bills Receivable		31,183.33	Wages and Salaries	16,159.94
Accounts Receivable		189,598.00	Other Liabilities (give detail)	57,465.70
Equipment		8,288,686.29	Accrued Accounts	195,774.36
Material and Supplies		137,697.84	Consumers' Deposits	25,744.66
Other Assets (give detail)		2,670,014.19	Reserve Accounts	364,132.51
Prepaid Accounts		240,315.33		
Undistributed Plant Items		161,424.23		
Debit	**INCOME ACCOUNT**		**Credit**	
Operating Expense	$	272,090.25	Operating Revenue	$ 617,835.59
Taxes Accrued		56,079.68	Sundry Interest	8,597.44
Interest on Funded Debt.		153,759.13		
Dividends		175,000.00		
Debit	**PROFIT AND LOSS**		**Credit**	
Balance from Income Account	$	30,496.03	Balance	$ 100,000.00
Misc. Deductions from Surplus		638.27		
Balance June 30, 1915		68,865.70		
	$	100,000.00		$ 100,000.00

PORTLAND GAS AND COKE COMPANY GENERAL BALANCE SHEET SEPTEMBER 30, 1915

Debit	CAPITAL ACCOUNT		Credit
Stocks and Bonds of other Companies owned by Respondent (give detail)	$ 126,401.00	Capital Stock	$ 5,000,000.00
		Funded Debt	6,038,000.00

Debit	ASSETS AND LIABILITIES		Credit
Cash	$ 2,875.83	Loans and Bills Payable	$ 122,000.00
Bills Receivable	28,658.98	Audited Vouchers and Accounts	83,775.35
Accounts Receivable	201,585.66	Wages and Salaries	19,679.00
Equipment	8,391,541.07	Other Liabilities (give detail)	57,465.70
Material and Supplies	114,210.67	Accrued Accounts	146,410.30
Other Assets (give detail)	2,670,019.19	Consumers' Deposits	26,190.56
Prepaid Accounts	238,181.51	Reserve Accounts	349,314.69
Undistributed Plant Items	179,284.88		

Debit	INCOME ACCOUNT		Credit
Operating Expenses	$ 407,911.30	Operating Revenue	$ 937,106.79
Taxes Accrued	84,462.47	Sundry Interest	7,302.85
Interest on Funded Debt.	231,440.41		
Dividends	210,000.00		

Debit	PROFIT AND LOSS		Credit
Misc. Deductions from Surplus	$ 672.27	Balance	$ 100,000.00
Balance Sept. 30, 1915	109,923.19	Balance from Income Account	10,595.46

NORTHWESTERN ELECTRIC COMPANY GENERAL BALANCE SHEET DECEMEBER 31, 1914

Debit	CAPITAL ACCOUNT		Credit	
Stocks and Bonds of other Companies owned by Respondent (give detail)—Investment Securities	$	212,315.00	Capital Stock—Common	$10,000,000.00
Funded Debt Owned—Bonds		5,000,000.00	Preferred	2,000,000.00
Gold Notes		865,000.00	Funded Debt—Bonds	$ 5,000,000.00
Stock in Treasury, Preferred		1,320,500.00	Two-Year Gold Notes	3,500,000.00
Unamortized Debt Disc. and Expense		220,541.91	Installments on Bond Subscriptions	462,187.50
			Installments on Preferred Stock Subscriptions	11,250.00

Debit	ASSETS AND LIABILITIES		Credit	
Cash	$	3,130.46	Loans and Bills Payable	$ 1,097,421.49
Bills Receivable		372,574.59	Audited Vouchers and Accounts	168,736.13
Accounts Receivable		30,715.15	Accrued Liabilities not yet Due—Taxes	13,456.56
Due from Agents and Consumers		82,568.58	Accrued Int. on Funded Debt	59,287.50
*Construction Work in Progress		14,331,001.44	Accrued Int. on Floating Debt	3,088.95
Materials and Supplies		21,787.98	Insurance and Casualty Reserves	130.70
Prepaid Insurance		3,243.96	Surplus Invested in Fixed Capital	142,286.89
Other Assets—Misc		781.45		
Accrued Interest not yet Due		33,041.86		

*This item to be changed to conform to purpose for which franchise is granted.

Debit	INCOME ACCOUNT		Credit	
Operating Expenses	$	55,405.60	Operating Revenue	$ 152,478.22
Taxes Accrued		10,003.17	Dividends on Stocks Owned	520.00
Interest on Funded Debt.		39,525.00	Interest on Securities, Loans and Accounts	7,751.22
Interest on Floating Debt.		16,478.27	Misc. Income	19.26
	$22,618,614.42			$22,618,614.42

Debit	PROFIT AND LOSS		Credit	
			Balance	$ 142,286.89
			Balance from Income Account	39,356.66

NORTHWESTERN ELECTRIC COMPANY GENERAL BALANCE SHEET MARCH 31, 1915

Debit	CAPITAL ACCOUNT		Credit	
Stocks and Bonds of other Companies owned by Respondent (give detail)—Investment Securities	$	235,567.70	Capital Stock—Common	$10,000,000.00
Funded Debt Owned—5% Bonds		5,000,000.00	Preferred	2,000,000.00
Gold Notes		1,095,000.00	Funded Debt—5% Bonds	5,000,000.00
Stock in Treasury, Preferred		1,284,600.00	2-Year 6% Gold Notes	3,500,000.00
Unamortized Debt Disc. and Expense		236,807.88	Installments on Bond Subscriptions	462,187.50
			Installments on Preferred Stock	11,435.50

Debit	ASSETS AND LIABILITIES		Credit	
Cash	$	32,115.96	Loans and Bills Payable	$ 1,458,081.37
Bills Receivable		378,078.50	Audited Vouchers and Accounts	167,718.40
Accounts Receivable		19,158.04	Taxes Accrued	2,285.16
Due from Agents and Consumers		90,288.42	Accrued Int. on Funded Debt	18,064.17
*Construction Work in Progress		14,402,152.96	Accrued Int. on Floating Debt	5,069.03
Materials and Supplies		28,835.81	Insurance and Casualty Reserves	254.32
Prepaid Insurance		5,386.83	Surplus Invested in Fixed Capital	181,643.55
Accrued Income not yet Due		36,381.81		
Other Suspense Deferred Dr. Items		6,449.87		
Corporate Deficit		613.82		

*This item to be changed to conform to purpose for which franchise is granted.

Debit	INCOME ACCOUNT		Credit	
Operating Expenses	$	54,155.39	Operating Revenue	$ 156,678.98
Taxes Accrued		10,851.45	Dividends on Stocks Owned	520.00
Int. on Funded Debt		37,728.29	Interest on Securities, Loans and Accounts	7,925.51
Int. on Floating Debt		17,690.76		
		$22,964,799.80		$22,964,799.80

Debit	PROFIT AND LOSS		Credit	
			Balance	$ 181,643.55
			Balance from Income Account	44,698.60

NORTHWESTERN ELECTRIC COMPANY GENERAL BALANCE SHEET
JUNE 30, 1915

Debit	CAPITAL ACCOUNT		Credit	
Stocks and Bonds of other Companies owned by Respondent (give detail)	$	233,778.95	Capital Stock	$10,728,900.00
Unamortized Debt Disc. and Expense		389,424.53	Funded Debt	3,000.000.00
			Installments on Bond Subscriptions	462,187.00
			Installments on Preferred Stock	1,424.00

Debit	ASSETS AND LIABILITIES		Credit	
Cash	$	687,245.84	Loans and Bills Payable	$ 1,766,824.96
Bills Receivable		390,048.50	Audited Vouchers and Accounts	157,779.55
Accounts Receivable		116,367.92	Accrued Taxes	26,223.33
*Construction Work in Progress		14,375,719.28	Accrued Interest	59,397.16
Material and Supplies		28,346.18	Surplus Invested in Fixed Capital	63,002.69
Accrued Income not Due.		29,943.13	Reserve for Accrued Depreciation	556.80
Deferred Charges		25,430.55		

*This item to be changed to conform to purpose for which franchise is granted.

Debit	INCOME ACCOUNT		Credit	
Operating Expenses	$	51,801.92	Operating Revenue	$ 145,506.10
Taxes Accrued		10,491.62	Dividends on Stocks Owned	520.00
Interest		60,176.60	Interest on Securities, Loans and Accounts	8,084.79
Dividend on Preferred Stock		21,631.86		
		$16,420,406.88		$16,420,406.88

Debit	PROFIT AND LOSS		Credit	
			Balance	$ 63,002.69
			Balance from Income Account	31,640.75
				$ 94,643.44
			Less Dividend	21,631.86
				$ 73,011.58

NORTHWESTERN ELECTRIC COMPANY GENERAL BALANCE SHEET SEPTEMBER 30, 1915

Debit	CAPITAL ACCOUNT		Credit	
Stocks and Bonds of other Companies owned by Respondent (give detail)	$	233,778.95	Capital Stock	$11,265,600.00
Unamortized Debt Disc. and Expense		301,728.71	Funded Debt	3,000,000.00
Discount on Preferred Stock		244,600.00	Installments on Bond Subscriptions	8,500,00
			Stock Subscriptions	1,981.50

Debit	ASSETS AND LIABILITIES		Credit	
Cash	$	16,717.60	Loans and Bills Payable	$ 1,270,000.00
Bills Receivable		391,328.90	Audited Vouchers and Accounts	119,380.99
Accounts Receivable		115,268.68	Wages and Salaries	3,908.17
*Plant		14,486,921.88	Accrued Interest	80,384.03
Material and Supplies		31,968.52	Accrued Taxes	31,553.96
Accrued Income not Due.		32,567.24	Reserve for Accrued Depreciation	522.28
Deferred Charges		25,387.39	Surplus Invested in Fixed Capital	73,011.58

*This item to be changed to conform to purpose for which franchise is granted.

Debit	INCOME ACCOUNT		Credit	
Operating Expenses	$	46,194.94	Operating Revenue	$ 131,395.85
Taxes Accrued		11,223.00	Dividends on Stocks Owned	390.00
Interest		57,410.16	Interest on Funded Debts Owned	2,880.00
			Interest on Securities, Loans and Accounts	5,587.61
		$15,995,095.97		$15,995,095.97

Debit	PROFIT AND LOSS		Credit	
			Balance	$ 73,011.58
			Balance from Income Account	25,425.36
				$ 98,436.94

AMERICAN DISTRICT TELEGRAPH COMPANY GENERAL BALANCE SHEET DECEMBER 31, 1914

Debit	ASSETS AND LIABILITIES		Credit
Accounts Receivable	$ 2,518.12	Advance Collections	$ 728.08

Debit	INCOME ACCOUNT		Credit
Operating Expenses	$ 2,768.72	Operating Revenue from Signal Service	$ 5,655.26
Repairs	419.22		
Reconstruction	59.49		
General Expense	706.90		
	$ 3,954.33		$ 5,655.26

Debit	PROFIT AND LOSS		Credit
		Balance from Income Account	$ 1,700.93

AMERICAN DISTRICT TELEGRAPH COMPANY GENERAL BALANCE SHEET MARCH 31, 1915

Debit	ASSETS AND LIABILITIES		Credit
Accounts Receivable	$ 1,724.70		

Debit	INCOME ACCOUNT		Credit
Operating Expense	$ 2,847.67	Operating Revenue from Signal Service	$ 5,582.74
Repairs	307.88		
Reconstruction	21.12		
General Expense	697.85		
	$ 3,874.52		$ 5,582.74

Debit	PROFIT AND LOSS		Credit
Balance	$ 1,708.22		
	$ 5,582.74		$ 5,582.74

AMERICAN DISTRICT TELEGRAPH COMPANY GENERAL BALANCE SHEET JUNE 30, 1915

Debit	ASSETS AND LIABILITIES		Credit
Accounts Receivable.....$	2,123.27	Advance Collections .....$	1,034.00
Debit	**INCOME ACCOUNT**		**Credit**
Operating Expenses .....$	2,748.81	Operating Revenue from Signal Service.....$	5,591.43
Repairs	333.42		
Reconstruction	268.84		
General Expense.	698.93		
Debit	**PROFIT AND LOSS**		**Credit**
Balance .....$	1,541.43		

AMERICAN DISTRICT TELEGRAPH COMPANY GENERAL BALANCE SHEET SEPTEMBER 30, 1915

Debit	ASSETS AND LIABILITIES		Credit
Accounts Receivable.....$	2,572.05	Advance Collections .....$	1,284.29
Debit	**INCOME ACCOUNT**		**Credit**
Operating Expense .....$	2,806.63	Operating Revenue .....$	5,815.64
Repairs	460.66		
General Expense.....	726.96		
$	3,994.25		
Debit	**PROFIT AND LOSS**		**Credit**
Balance .....$	1,821.39		

FRANCHISES

Ordinance No. 107—former City of Albina—entitled "An Ordinance authorizing the erecting, laying, stretching and maintaining of poles and wires for use in conducting electricity in the City of Albina by the Albina Light & Water Company and its assigns." Approved March 5, 1890. Expires, no time. Owned by Portland Railway, Light & Power Company.

Ordinance No. 183—former City of East Portland—entitled: "An Ordinance granting to the Oregon & California Railroad Company the right of way on First street." Passed June 17, 1876. Expires, no time. Owned by Oregon & California Railroad Company, leased by the Southern Pacific Railway.

Ordinance No. 310—former City of East Portland—entitled: "An Ordinance authorizing the Oregon Railway & Navigation Company to lay a railroad track and run cars over the same within the City of East Portland." Passed September 13, 1881. Expires, no time. Owned by the Oregon Railroad & Navigation Company. Amended by Ord. 26460.

Ordinance No. 595—former City of East Portland—entitled: "An Ordinance granting H. A. Hogue, C. P. Hogue and D. H. Jones, their successors and assigns, the right and privilege of erecting, constructing, maintaining and operating an electric light and power plant in the City of East Portland." Approved June 29, 1887. Expires, no time. Owned by Portland Railway, Light & Power Company.

Ordinance No. 631—former City of East Portland—entitled: "An Ordinance authorizing the Oregon Railway & Navigation Company to lay down railway tracks and run cars over the same, over, along and across certain streets in the City of East Portland, to connect with the bridge of the said company to be constructed across the Willamette River between the Cities of East Portland and Portland." Approved December 5, 1887. Expires, no time. Owned by the Oregon Railroad & Navigation Company. Sec. 2 repealed by Ord. 26459.

Ordinance No. 681—former city of East Portland—entitled: "An Ordinance authorizing George W. Brown, his successors or assigns, to construct, maintain and operate street railways in the City of East Portland, County of Multnomah, State of Oregon." Approved November 22, 1888. Expires, fifty years. Owned by the Portland Railway, Light & Power Company.

Ordinance No. 888—former City of East Portland—entitled: "An Ordinance authorizing George W. Brown, his successors and assigns, to construct, and maintain and operate a street railway on certain streets in the City of East Portland." Owned by the Portland Railway, Light & Power Company. Approved October 22, 1890. Expires, fifty years.

Ordinance No. 967—former City of East Portland—entitled: "An Ordinance confirming to the East Side Railway Company all the rights, privileges and franchises granted by Ordinance No. 888 entitled: 'An Ordinance authorizing George W. Brown, his successors, or assigns, to construct, maintain and operate a street railway on certain streets in the City of East Portland, Oregon.'" Approved May 22, 1891. Owned by the Portland Railway, Light & Power Company.

Ordinance No. 984—former City of East Portland—entitled: "An Ordinance authorizing George W. Brown, his successors or assigns,

to construct, maintain and operate an electric light and power plant in the City of East Portland, Multnomah County, Oregon." Approved June 25, 1891. Expires, no time. Owned by Portland General Electric Company.

Ordinance No. 2969, entitled: "An Ordinance authorizing the Oregonian Railway Company (limited) to lay a railway track and run cars over the same within the City of Portland." Approved January 7, 1881. Expires, no time. Owned by the Oregon & California Railway Company, and leased by the Southern Pacific Company.

Ordinance No. 3513, entitled: "An Ordinance granting the right of way through the streets of the City of Portland for laying pipes for the purpose of conveying water through and throughout the city." Approved July 21, 1882. Owned by Portland Railway, Light & Power Company.

Ordinance No. 3538, entitled: "An Ordinance authorizing the erection and maintaining of electric light wires and the necessary supports therefor on and over the streets of the City of Portland." Approved September 8, 1882. Expires, no time. Owned by Portland Railway, Light & Power Company.

Ordinance No. 3656, entitled: "An Ordinance authorizing the Northern Pacific Terminal Company of Oregon, its successors and assigns, to construct and maintain a double railway track on North Front street, in the City of Portland, from the northern limits of said city to the south line of 'P' street, and a single track from thence to a point opposite the southwest corner of Block G, and eighty feet distant therefrom with a side track from a point opposite to block 220 to block H, both in Couch's Addition to said City of Portland; also sufficient and suitable side tracks from, at, or near the foot of 'P' street, curving across and along East and West Park streets and M, N, O and P streets, and to confirm to the Oregon & California Railway Company the right to maintain and operate its main and side tracks in North Front street, in said city." Approved December 8, 1882. Expires, no time. Owned by the Northern Pacific Terminal Company of Oregon.

Ordinance No. 4932, entitled: "An Ordinance authorizing and directing a contract with P. F. Morey and his assigns, and authorizing and allowing the erection and maintaining of poles and wires used in connection with or as a part of electric light works, in, upon and over the streets, alleys and public parks and public grounds of the City of Portland." Approved October 7, 1886. Expires, no time. Owned by Portland Railway, Light & Power Company.

Ordinance No. 4942, entitled: "An Ordinance granting to the Northwestern American District Telegraph Company, of Oregon, the right and privilege of erecting, constructing, maintaining and operating its telegraph system in the City of Portland." Approved October 21, 1886. Expires, no time. Owned by American District Telegraph Company.

Ordinance No. 4995, entitled: "An Ordinance granting to the Pacific Postal Telegraph Cable Company the right and privilege of erecting, constructing, laying, maintaining and operating its telegraph lines in the City of Portland." Approved January 6, 1887. Expires, no time. Owned by the Postal Telegraph Cable Company.

Ordinance No. 5100, entitled: "An Ordinance granting to the Portland & Willamette Valley Railway Company, its successors and assigns, a right of way over certain lands belonging to the City of Port-

land." Approved June 17, 1887. Expires, no time. Owned by Oregon & California Railroad Company, leased by Southern Pacific Company.

Ordinance No. 5163, entitled: "An Ordinance authorizing the Oregon Railway & Navigation Company, its successors and assigns, to cross with bridge approach and tracks North Front street and North Third street, and to occupy portions of said streets." Approved August 19, 1887. Expires, no time. Owned by the Oregon Railroad & Navigation Company.

Ordinance No. 5568, entitled: "An Ordinance authorizing the Northern Pacific Terminal Company of Oregon to construct and maintain certain railroad tracks in and across certain streets in the City of Portland." Approved September 11, 1888. Expires, no time. Owned by the Northern Pacific Terminal Company.

Ordinance No. 7134, entitled: "An Ordinance to authorize and empower the Committee on Free Bridges to enter into a contract with the Columbia Street Bridge Company to purchase the bridge commonly known as the 'Madison Street Bridge,' and to grant to the Mount Tabor Street Railroad Company, and its assigns, the right of way across the same." Approved November 11, 1891. Expires, 30 years. Owned by the Portland Railway, Light & Power Company.

Ordinance No. 7443, entitled: "An Ordinance granting to the Highland Park Water Company the right of way through and across certain streets and avenues of that portion of the City of Portland known as Highland Park, Irvington Park, Woodlawn Heights, Cloverdale, Cloverdale Extension No. 1, Cloverdale Extension No. 2 and Columbia Heights, for laying pipes for the purpose of conveying water through and throughout said portion of said city." Approved March 3, 1892. Expires, 20 years. Owner unknown.

Ordinance No. 7578, entitled: "An Ordinance granting to the Investman Company the right of way through and across certain streets in the City of Portland, Oregon, for the purpose of laying pipes for conveying water." Approved April 25, 1892. Expires 20 years. Owned by City of Portland.

Ordinance No. 8101, entitled: "An Ordinance granting to the East Portland Gas Light Company the right to lay pipes and mains underground through the streets and alleys of that portion of the City of Portland lying on the east bank of the Willamette River, for the purpose of carrying gas into, through and throughout said portion of the City of Portland, and to supply the inhabitants thereof with gas." Approved January 5, 1893. Expires, no time. Owned by the Portland Gas and Coke Company.

Ordinance No. 8208, entitled: "An Ordinance granting to the Investment Company the right of way through and across certain streets in the City of Portland, Oregon, for the purpose of laying pipes for carrying water." Approved March 16, 1893. Expires 20 years. Owned by City of Portland.

Ordinance No. 8275, entitled: "An Ordinance authorizing the East Side Railway Company, its successors or assigns, to construct, maintain and operate a street railway on East Eleventh street, in the City of Portland, Oregon." Approved May 4, 1893. Expires, 30 years. Owned by the Portland Railway, Light & Power Company.

Ordinance No. 8419, entitled: "An Ordinance granting to the Western Union Telegraph Company the right to place and maintain its poles and lines in the streets, alleys and public ways of the City of Portland, State of Oregon, on the terms and conditions herein

stated." Approved July 21, 1893. Expires, no time. Owned by Western Union Telegraph Company.

Ordinance No. 8445, entitled: "An Ordinance authorizing the East Side Railway Company, its successors or assigns, to construct, maintain and operate a street railway on Madison street, in the City of Portland, County of Multnomah, State of Oregon." Approved August 4, 1893. Expires, 30 years. Owned by the Portland Railway, Light & Power Company.

Ordinance No. 9190, entitled: "An Ordinance granting to the East Side Railway Company, its successors and assigns, certain rights on East Water street, etc." Approved March 22, 1895. Owned by the Portland Railway, Light & Power Company.

Ordinance No. 9291, entitled: "An Ordinance to vacate a portion of Third street, between the north line of Glisan street and the north line of Hoyt street, and to authorize the Oregon Railway & Navigation Company, its successors and assigns, to construct upon the part of said Third street so vacated an elevated roadway from Third street, connecting with the upper deck of the steel bridge of said railway crossing the Willamette River." Approved June 6, 1895. Expires, no time. Franchise granted by Section 2. Owned by the Oregon Railway & Navigation Company.

Ordinance No. 9363, entitled: "An Ordinance authorizing Charles E. Smith, G. Glass and Adolph A. Dekum, or assigns to construct, maintain and operate a system of street railways in the City of Portland." Approved July 18, 1895. Expires, 30 years. Owner, Portland Railway Company.

Ordinance No. 9641, entitled: "An Ordinance granting to L. Zimmerman the right to construct, establish and carry on or operate upon this property in the City of Portland, a packing and meat business." Approved February 12, 1896. (Repealed by Ordinance No. 10560). Approved December 2, 1897. Owned by L. Zimmerman.

Ordinance No. 11086, entitled: "An Ordinance authorizing the placing of a permanent railway track in Upshur street between the westerly line of Fifteenth street to a point 100 feet westerly from the west line of Eighteenth street, in Watson's Addition to the City of Portland, Multnomah County, Oregon." Approved January 9, 1899. Expires, 33 years. Owned by the Northern Pacific Terminal Company.

Ordinance No. 11111, entitled, "An Ordinance authorizing the Oregon Railroad & Navigation Company, its successors and assigns, to lay a railroad track upon certain streets in the City of Portland, and to run cars and locomotives over the same." Approved January 21, 1899. Expires, no time. Owned by the Oregon Railroad & Navigation Company.

Ordinance No. 11270, entitled: "An Ordinance authorizing the Eastern Lumber Company to construct and maintain a side track of standard gauge across Front street and to connect with the track of the Northern Pacific Railroad Company on Sherlock avenue, between Colton and Hull streets." Approved June 28, 1899. Expires, 30 years. Owned by the Northern Pacific Terminal Company.

Ordinance No. 11279, entitled: "An Ordinance to authorize the Oregon & California Railroad Company to construct an embankment in lieu of the existing trestle on East Stark street, East Portland, now City of Portland, and to construct thereunder a tubular culvert for drainage purposes." Approved June 6, 1899. Expires, no time. Owned

by Oregon & California Railroad Company. Leased by the Southern Pacific Company.

Ordinance No. 12590, entitled: "An Ordinance granting to the Pacific States Telephone and Telegraph Company, its successors and assigns, the right and privilege to continue to maintain and operate its present telephone and telegraph system, to erect and maintain such additional poles and wires as may be necessary for its telephone and telegraph business and to maintain and operate an underground telephone and telegraph system, for the period of twenty-five years, in, under and upon the streets, alleys, and public highways of the City of Portland, and to repeal all existing franchises and ordinances under which the said Pacific States Telephone and Telegraph Company is now operating or could operate in any part of the City of Portland." Approved February 21, 1902. Expires, 25 years. Owned by Pacific States Telephone and Telegraph Company.

Ordinance No. 13054, entitled: "An Ordinance authorizing the Northern Pacific Terminal Company of Oregon to place a side track on Front street." Approved November 11, 1902. Expires, no time. Owned by the Northern Pacific Terminal Company.

Ordinance No. 13053, entitled: "An Ordinance granting to the Oregon Water Power & Railway Company, its successors and assigns, the right and privilege to construct and to maintain and operate railways in the City of Portland." Approved November 10, 1902. Expires, 25 years. Owned by the Portland Railway, Light & Power Company.

Ordinance No. 13089, entitled: "An Ordinance granting to Portland Railway Company, its successors and assigns, the right to construct, acquire and own and to maintain, operate and use railways and poles and wires and underground conduits, cables and conductors in the City of Portland, Oregon." Approved November 25, 1902. Expires 31st day of December, 1927. Owned by Portland Railway, Light & Power Company.

Ordinance No. 13113, entitled: "An Ordinance granting to the Oregon Water Power & Railway Company, and its successors and assigns, the right and privilege to construct and to maintain and operate railways in the City of Portland." Approved December 18, 1902. Expires, 25 years. Owned by the Portland Railway, Light & Power Company.

Ordinance No. 13177, entitled: "An Ordinance granting to the City & Suburban Railway Company, its successors and assigns, the right to construct, acquire and own and to maintain and use railways and poles, and wires and underground conduits, cables and conductors in the City of Portland, Oregon." Approved, January 13, 1903. Expires 31st day of December, 1932. Owned by the Portland Railway, Light & Power Company. Amended by Ordinance No. 17848.

Ordinance No. 13791, entitled: "An Ordinance granting to the Oregon Water Power & Railway Company, a corporation, its successors and assigns, the right to substitute for the street car fenders described in the act of the Legislative Assembly of the State of Oregon, entitled, 'An Act to require all individuals, firms, associations, companies and corporations, owning, managing or operating any street railway, to provide suitable aprons, fenders or guards on street cars, and providing a penalty for violation thereof.' Approved February 17, 1903, the street car fender hereinafter referred to, and granting said corporation the right to use said substituted street car fender on all

cars operated by it in the City of Portland." Approved February 6, 1904.

Ordinance No. 13897, entitled: "An Ordinance granting to the City Messenger & Delivery Company, a corporation, its successors and assigns, the right, franchise and privilege to erect poles and string wires thereon; to construct underground conduits, and to lay wires in underground conduits and to stretch wires along, over, upon and across the streets, avenues and public places of the City of Portland, Oregon, for the transmission of electric current to be used solely and exclusively in connection with a messenger system and service and a call-box system; and to establish, maintain and operate a messenger system and service and a system of call-boxes and fixing the compensation to be paid therefor." Approved April 8, 1904. Owned by City Messenger & Delivery Company. Expires, 25 years.

Ordinance No. 14083, entitled: "An Ordinance authorizing the Oregon Water Power and Railway Company, a corporation, to construct and maintain a sentry box at the intersection of Hawthorne avenue and East First Street, City of Portland, Multnomah County, Oregon, and to authorize and require the removal of the sentry box from the place where the same is now located at the intersection of Hawthorne Avenue and East First street." Approved July 8, 1904. Owned by the Portland Railway, Light & Power Company.

Ordinance No. 14699, entitled: "An Ordinance granting to Charles E. Summer, his successors and assigns, the right, privilege and franchise to erect poles and string wires and cables thereon; to construct underground conduits and manholes and to lay wires and cables in underground conduit and through manholes, and to stretch wires and cables along, over, upon and across streets, alleys and avenues and public places of the City of Portland, for the transmission of sounds, signals, conversation and intelligence through and over said wires and cables by means of electricity, and to construct, establish, equip and install a telephone and telegraph system, and to conduct a general telephone and telegraph business within the City of Portland, and fixing the compensation to be paid therefor." Owned by the Home Telephone and Telegraph Company. Expires, 25 years. By proclamation, July 1, 1905.

Ordinance No. 15427, entitled: "An Ordinance granting to the United Railways Company, its successors and assigns, the right to construct, lay down, maintain and operate railways, poles and wires and underground conduits in the City of Portland, Oregon." Owned by the United Railways Company. Expires, 25 years. Became a law June 5, 1906, without Mayor's signature.

Ordinance No. 15428, entitled: "An Ordinance granting to the Willamette Valley Traction Company, its successors and assigns, the right to construct, lay down, maintain and operate railways, poles and wires and underground conduits in the City of Portland, and to operate cars over certain streets in said City of Portland, in accordance with the provisions of an ordinance entitled, 'An Ordinance granting to the United Railways Company, its successors and assigns, the right to construct, lay down, maintain and operate railways, poles and wires and underground conduits in the City of Portland, Oregon.'" Owned by the Oregon Electric Railway Company. Expires, 25 years. Became a law June 5, 1906, without Mayor's signature.

Ordinance No. 16730, entitled: "An Ordinance granting to the Economy Gas Company, its successors and assigns, the right to construct, acquire, own, maintain, conduct and operate a plant or plants

for the manufacture and distribution of gas in the City of Portland, Oregon, to sell gas for domestic and other purposes, and to lay pipes and mains for the purpose of conducting and distributing said gas through, in and over said city." Owned by the Economy Gas Company. Expires, 25 years. Proclamation by the Mayor, June 14, 1907.

Ordinance No. 17853, entitled: "An Ordinance granting to the United Railways Company, its successors and assigns, the right to construct, lay down, maintain and operate railways and poles and wires and underground conduits in the City of Portland, Oregon, and repealing Ordinance No. 14564." Owned by the United Railways Company. Expires, 25 years. Approved May 26, 1908.

Ordinance No. 19176, entitled: "An Ordinance granting to Portland Railway, Light & Power Company, its successors and assigns, the right to construct, acquire and own, and to maintain, operate and use railways and street railways and poles and wires and underground conduits, cables and conductors in the City of Portland, Oregon." Owned by the Portland Railway, Light & Power Company. Expires, 25 years. Passed over Mayor's veto April 28, 1909.

Ordinance No. 20479, entitled: "An Ordinance granting to the Oregon Railroad & Navigation Company, a corporation, its successors and assigns, the franchise and right to construct and equip, own, maintain and operate a railway track and sidetracks, all of standard gauge, extending from a connection with the constructed railroad of said company at the intersection of East Ankeny street and East Second street, and thence in a southeasterly direction crossing East Ash street to East Third street, and extending thence southerly along East Third street from a point between East Ash street and East Pine street to Hawthorne avenue, and to operate locomotives and cars over the same, in the City of Portland." Owned by the Oregon Railroad & Navigation Company. Approved December 10, 1909. Expires, 25 years.

Ordinance No. 21735, entitled: "An Ordinance granting to Heights Trust Company, its successors and assigns, the right to construct, acquire and own, and to maintain, operate and use railways and street railways, and poles and wires and underground conduits, cables and conductors in the City of Portland, Oregon." Amended by Ordinance No. 23554. Owned by the Heights Trust Company. Approved July 28, 1910. Expires, December 31, 1932.

Ordinance No. 22539, entitled: "An Ordinance granting to the Oregon Electric Railway Company, a corporation, its successors and assigns, the right to construct, lay down, maintain and operate railways, poles and wires and underground conduits in the City of Portland, Oregon." Amended by Ordinance No. 25998. Owned by the Oregon Electric Railway Company. Approved December 14, 1910. Expires, 25 years. Amended by Ordinance No. 25998.

Ordinance No. 22540, entitled: "An Ordinance granting to Abe Tichner, his heirs, executors, administrators and assigns; the Oregonian Publishing Company, a corporation; the Portland Railway, Light & Power Company, a corporation; and College Endowment Association, a corporation, their successors and assigns, the right and privilege to construct, maintain and use an underground conduit for the purpose of conducting pipes for steam heat, fuel-oil and water across Alder street, between Sixth and Seventh streets, in the City of Portland, Oregon." Owned by Abe Tichner, Oregonian Publishing Company, Portland Railway, Light & Power Company and College

Endowment Association. Approved December 17, 1910. Expires, 25 years.

Ordinance No. 22989, entitled: "An Ordinance granting to the Mount Hood Railway & Power Company, its successors and assigns, for a period of twenty-five years, the right and privilege to erect, construct, maintain and operate an electric plant, heat and power system in the City of Portland, Oregon, and the right and privilege to erect poles and stretch wires thereon, and thereover, through, over and upon the streets, alleys and public highways, and to construct underground conduits or pipes, with all necessary man-holes and other appliances in and under the said streets, alleys and public highways in the City of Portland, for conducting and conveying electricity for light, heat and power, to charge rents and tolls therefor, and to collect the same, and authorize the said Mount Hood Railway & Power Company to trim shade and ornamental trees in the said streets, alleys and public highways, and granting right of way for conduit, canal or flume over and across the northwest quarter of the southwest quarter of section five (5), township two (2) south, range five (5), east of the Willamette Meridian, and to provide for the punishment of those injuring or interfering with its property." Owned by Mount Hood Railway & Power Company. Approved March 31, 1911.

Ordinance No. 23237, entitled: "An Ordinance granting to Heights Trust Company, its successors and assigns, the right to construct, acquire and own, and to maintain, operate and use railways and street railways, and poles and wires and underground conduits, cables and conductors in the City of Portland, Oregon." Owned by Heights Trust Company. Approved April 29, 1911. Expires, December 31, 1932. Amended by Ordinance 23554.

Ordinance No. 23256, entitled: "An Ordinance designating certain public streets of the City of Portland across and over which the Oregon-Washington Railroad & Navigation Company, a railway corporation of the State of Oregon, its successors and assigns, may and shall locate and construct its railroad and railroad tracks for the purpose of making connection with its proposed tracks on its new steel bridge being constructed across the Willamette River, with the tracks of the said company on the west side of the river in the City of Portland, and with the tracks and terminal facilities to be used by said company in connection therewith, and designating certain other public streets in the City of Portland across and over which said Oregon-Washington Railroad & Navigation Company, its successors and assigns, may and shall locate and construct its railroad and tracks to make connection between its present tracks, now located on Railroad street, with the railroad tracks of its new line of railroad constructed and being constructed by way of the peninsula between the Willamette and Columbia rivers to facilitate the entrance into the City of Portland of said new line of railroad; and designating likewise certain other streets on the east side of the Willamette River and in the neighborhood of the east approach to the new steel railroad bridge being constructed by said Oregon-Washington Railroad & Navigation Company across the Willamette River, over and across which said Oregon-Washington Railroad & Navigation Company, its successors and assigns, may and shall locate and construct its railroad and tracks to make connection between the railroad tracks of said company to be laid over the said railroad bridge and the line of railroad of the said company on the east side of the Willamette River." Owned by the Oregon-Washington

Railroad & Navigation Company. Approved May 11, 1911. Expires, 25 years.

Ordinance No. 23257, entitled: "An Ordinance authorizing the Oregon-Washington Railroad & Navigation Company, its successors and assigns, to occupy certain parts of Glisan, First and Front streets for the construction and maintenance thereon and thereover of a bridge approach to the proposed new railroad bridge being constructed over the Willamette River by the Oregon-Washington Railroad & Navigation Company, successor to the Oregon Railroad & Navigation Company." Owned by The Oregon-Washington Railroad & Navigation Company. Approved May 11, 1911. Expires, 25 years.

Ordinance No. 24198, entitled: "An Ordinance designating certain streets of the City of Portland across, over and along which the Oregon-Washington Railroad & Navigation Company, a railway corporation, of the State of Oregon, its successors and assigns, may and shall locate and construct its railroad and railroad tracks for its line from St. Johns to Troutdale." Owned by the Oregon-Washington Railroad & Navigation Company. Approved October 22, 1911. Expires, 25 years.

Ordinance No. 25930, entitled: "An Ordinance granting to the Northwestern Electric Company, a corporation, its successors and assigns, for a period of 25 years the right and privilege to erect, construct, maintain and operate an electric light, heat and power system in the City of Portland, Oregon, and the right and privilege to erect poles and stretch wires thereon and thereover, through, over and upon streets, alleys and public highways, and to construct underground conduits or pipes with all necessary manholes and other appliances in and under the said streets, alleys and public highways in the City of Portland for the conducting and conveying electricity for light, heat and power, to charge rents and tolls therefor, and to collect the same, and authorizing the said Northwestern Electric Company to trim shade and ornamental trees in the said streets, alleys and public highways." Owned by the Northwestern Electric Company. Approved October 1, 1912.

Ordinance No. 25997, entitled: "An Ordinance granting to F. E. Dooly, John H. Hall, L. H. Tarpley and W. O. Van Schuyver, their successors or assigns, the right to lay and maintain pipes, conduits and apparatus for the construction of a hot water and steam heating plant under certain streets, avenues, alleys and public places of the City of Portland, Oregon, and to charge rents and tolls therefor; and to regulate the construction of said heating plant and provide penalties for the violation of this ordinance." Owned by F. E. Dooley, John H. Hall, L. H. Tarpley and W. O. Van Schuyver. Approved October 8, 1912. Expires, 25 years.

Ordinance No. 26080, entitled: "An Ordinance granting to Portland Railway, Light & Power Company, its successors and assigns, the right to construct, acquire and own, and to maintain, operate and use railways and street railways and poles and wires and underground conduits, cables and conductors in the City of Portland, Oregon." Owned by the Portland Railway, Light & Power Company. Approved October 10, 1912. Expires, December 31, 1932.

Ordinance No. 26511, entitled: "An Ordinance granting to the Oregon & California Railroad Company, a corporation, its successors, lessees, and assigns, the right to construct, lay down, maintain and operate railways, poles and wires, and underground conduits in the City of Portland, Oregon." Owned by the Oregon & California Railroad Company. Approved January 16, 1913. Expires, 25 years.

Ordinance No. 26512, entitled: "An Ordinance granting to the Oregon & California Railroad Company, a corporation, its successors, lessees and assigns, the right to lay, construct, and maintain railway tracks and to operate cars thereover, and to transport passengers, mail, baggage and express thereon, and to erect, construct, maintain and operate necessary power, telephone and telegraph lines on Fourth street in the City of Portland, Multnomah County, Oregon, and along and over the right of way of the Oregon & California Railroad Company now there, within the corporate limits of the City of Portland, Multnomah County, Oregon, and the right to cross any and all streets to the southern limits of the said City of Portland, or any extension thereof, intersecting said right of way." Owned by the Oregon & California Railroad Company. Approved January 16, 1913. Expires, 25 years.

Ordinance No. 26513, entitled: "An Ordinance granting to Spokane, Portland & Seattle Railway Company, a corporation, its successors and assigns, the right and privilege of laying down, constructing and maintaining standard gauge railway tracks for a commercial railroad, and to operate locomotives and cars, and to transport passengers, mail, baggage, express and freight, on certain streets." Owned by Spokane, Portland & Seattle Railway Company. Approved January 16, 1913. Expires, 25 years.

Ordinance No. 26648. An Ordinance granting to Portland Railway, Light & Power Company, its successors and assigns, the right to construct, acquire and own, and to maintain, operate and use railways and street railways and poles and wires and underground conduits, cables and conductors in the City of Portland, Oregon. Franchise owned by the Portland Railway, Light & Power Company. Approved February 21, 1913. Expires, December 31, 1932.

Ordinance No. 27160. An Ordinance granting to Northwestern Electric Company, a corporation, its successors and assigns, for a period of twenty-five years, the right and privilege to lay down, maintain and operate steam pipes and conduits through and under the streets, alleys and public highways in the city of Portland for the transmission of heat and the operating of a steam heating plant and business in said city. Franchise owned by Northwestern Electric Company. Approved June 6, 1913. Expires, 25 years.

Ordinance No. 27235. An Ordinance granting to the Errol Heights Railway Company (an Oregon corporation), grantee, its successors and assigns, the franchise, right and privilege of constructing, maintaining and operating a line of railway, with the necessary poles, wires, underground conduits, conductors and other appliances for the operation thereof, in, upon and over certain streets in the City of Portland, Oregon. Franchise owned by the Errol Heights Railway Company. Approved June 14, 1913. Expires, 25 years.

Ordinance No. 28481. An Ordinance granting to United Railways Company, its successors and assigns, the right and privilege of laying down, constructing and maintaining a commercial railway, with poles, wires and underground conduits in the City of Portland. Passed by the Council February 4, 1914. Expires, 25 years.

Ordinance No. 28619. An Ordinance granting to Portland Railway, Light & Power Company, its successors and assigns, the right to construct, acquire and own, and to maintain, operate and use railways and street railways and poles and wires and underground conduits, cables and conductors in the City of Portland, Oregon. Passed by the Council March 4, 1914. Expires December 31, 1932.

Ordinance No. 28803. An Ordinance granting to Heights Trust Company, its successors and assigns, the right to construct, acquire and own, and to maintain, operate and use railways and street railways, and poles and wires and underground conduits, cables and conductors in the City of Portland, Oregon. Passed by the Council April 8, 1914. Expires December 31, 1932.

Ordinance No. 29238. An Ordinance granting to Portland Railway, Light & Power Company, its successors and assigns, rights, privileges and franchises to operate cars on and over bridges across the Willamette River in the City of Portland, Oregon, and the approaches of such bridges. Passed by the Council July 22, 1914. Expires December 31, 1932.

Ordinance No. 29481. An Ordinance granting to the Portland and Oregon City Railway Company, a corporation, already formed, its successors and assigns, the right and privilege of laying down, constructing and maintaining railways, poles, wires and underground conduits in the City of Portland, Oregon. Passed by the Council September 9, 1914. Expires, 25 years.

Ordinance No. 30132, entitled: "An Ordinance granting to United Railways Company, its successors and assigns, the right and privilege of laying down, constructing and maintaining a commercial railway, with poles, wires and underground conduits in the City of Portland." Owned by United Railways Company. Passed by the Council February 10, 1915. Expires June 1, 1933.

Respectfully submitted,

A. L. BARBUR,
Auditor of the City of Portland.

LIST OF REVOCABLE PERMITS GRANTED BY ORDINANCE SINCE 1890.

TEMPORARY RAILWAY TRACKS AND SWITCHES

Ordinance No. 6742. Temporary railway track in "U" street between westerly line of Fourteenth street and 100 feet west of west line of Sixteenth street. Northern Pacific Terminal Co.

Ordinance No. 7626. Side track in front of block 20, Stephens Addition for accommodation of Dr. J. Surman. Oregon & California Railway Co.

Ordinance No. 7811. Side track in Front street from intersection of Front and Quimby streets to connect with coal bunkers on lots 38, 39, 40 and 41, block 318, Couch's Addition. Oregon Improvement Co.

Ordinance No. 8099. Side track on Fourth street from 10 feet North of the north line of Hoyt street to north line of Glisan street for accommodation of Union Meat Co. Oregon & California R. R. Co.

Ordinance No. 8209. Spur track on East First street in front of block 22, Stephens Addition for accommodation of R. M. Wade & Co. Oregon & California Railway Co.

Ordinances Nos. 8263 and 8339. Side track on East First street from 120 feet south of south line of block 22, Stephens Addition to center line of East Main street for accommodation of R. M. Wade and Wm. M. Ladd. Oregon & California Railway Co.

Ordinance No. 9278. Side track on Ninth street from 100 feet north of the north line of Johnson street to north line of Irving street for accommodation of J. McCraken Co. Northern Pacific Terminal Co.

Ordinance No. 11405. Side track in Wilson street from Sherlock avenue to point 300 feet west. Northern Pacific Terminal Co.

Ordinance No. 13183. Side track on Fourth street opposite south one-half of block W, Couch's Addition. Oregon & California R. R. Co.

Ordinance No. 14004. Side track on Upshur street from intersection Terminal and Upshur street to 20 feet east of east line of Seventeenth street for accommodation of Everding & Farrell. Northern Pacific Terminal Co.

Ordinance No. 14241. Move sidewalk and lay railway track in diagonal roadway between Union Depot and Front street. Northern Pacific Terminal Co.

Ordinance No. 14724. Side track on Ninth street from 100 feet south of Irving street to Hoyt street for accommodation of Woodard Clarke & Co. Northern Pacific Terminal Co.

Ordinance No. 14861. Side track on North Front street near intersection of Tenth and Quimby streets to connect with coal bunkers of Holmes Coal & Ice Co. Northern Pacific Terminal Co.

Ordinance No. 14964. Side track on Upshur street in front of block 28, Watson's Addition. Northern Pacific Terminal Co.

Ordinance No. 15462. Spur track on Sherlock avenue at 100 feet north of Hull street to boiler works in block 37, Sherlock's Addition. Willamette Iron & Steel Works.

Ordinance No. 15713. Side track on North Thirteenth street from 100 feet south of Irving street to Glisan street. Northern Pacific Terminal Co.

Ordinance No. 16003. Side track on York street from Sherlock avenue to 150 feet west of Twenty-fourth street. Northern Pacific Terminal Co.

Ordinance No. 16152. Side track and switches on Fifteenth street from Upshur street to Marshall street. Portland & Seattle Railway Co.

Ordinance No. 16235. Side track in Railroad street in front of block 59, Albina, for accommodation of E. H. Ingham. Oregon Railway & Navigation Co.

Ordinance No. 16480. Side track and switches on East First street between East Morrison street and East Main street for accommodation of Fisher, Thorsen & Company. Oregon & California Railway Co.

Ordinance No. 16780. Side track and spur track on East Alder street between East Water street and Willamette River. Portland Fuel Co.

Ordinance No. 17359. Side track and switches on Fifteenth street from north line of Marshall street to north line of Johnson street. Portland & Seattle Railway Co.

Ordinance No. 17798. Side track and switches on Thirteenth street between Glisan street and 100 feet north of Burnside street. Northern Pacific Terminal Co.

Ordinance No. 18323. Single track on north side Upshur street between Seventeenth and Nineteenth streets. Northern Pacific Terminal Co.

Ordinance No. 18388. Side track and switch on East First street between East Morrison street and East Taylor street. Oregon & California Railway Co.

Ordinance No. 18649. Side track on East First street between East Oak and East Washington street. National Cold Storage & Ice Co.

Ordinance No. 19344. Side track and switches on Fifteenth street from north line of Johnson street to north line of Glisan street. Spokane, Portland & Seattle Railway Co.

Ordinance No. 19905. Single track on Hoyt street from south line of block 113 to north line of block 112, Couch's Addition. Northern Pacific Terminal Co.

Ordinance No. 20147. Two railroad tracks across Front street to lots 22 and 23, River Block 2, Doscher's Addition. B. E. Martin.

Ordinance No. 21716. Side track and spur across a portion of Russell and Marion streets for accommodation of Edlefsen Fuel Co. Oregon Railway & Navigation Co.

Ordinance No. 22147. Single track railway on Upshur street from 100 feet west of North Eighteenth street to east line of North Twentieth street. Northern Pacific Terminal Co.

Ordinance No. 22253. Spur track on North Front street at North Tenth street. Northern Pacific Terminal Co.

Ordinance No. 22293. Spur track on Macadam street from United Railways Co. track. Portland Furniture Manufacturing Co.

Ordinance No. 22534. Spur track from P. R. L. & P. Co.'s track at intersection of Lombard and Newell streets to point in Newell street 450 feet north therefrom. Francis I. McKenna.

Ordinance No. 22536. Electric railway on Villa avenue and Hassalo street. Mt. Hood Railway & Power Co.

Ordinance No. 22708. Railway track on East Main street from East Water street to Willamette River. Columbia Contract Co.

Ordinance No. 23336. Side track on East First street between East Washington and East Alder. H. H. Brown.

Ordinance No. 23627. Spur track from main line of O-W. R. & N. Co. crossing Williams avenue and Winchell street. Oregon-Washington Railway & Navigation Co.

Ordinance No. 23628. Single track railway from west line of Tenth street between Lovejoy and Marshall to block 199, Couch's Addition, and return. Spokane, Portland & Seattle Railway Co.

Ordinance No. 23633. Spur track from a point 700 feet west of Brandon street across Brandon and Derby streets. Oregon Railway & Navigation Co.

Ordinance No. 23796. Spur track on Macadam street between Gaines street and Lane street connecting with United Railway Co.'s track. Fisher, Thorsen & Co.

Ordinance No. 24029. Single track railway over certain streets (expires Sept. 26, 1913). Mt. Hood Railway & Power Co.

Ordinance No. 24328. Spur track east side of Front street from 30 feet north of Davis street to north line of East Couch street. United Railways Co.

Ordinance No. 24329. Side track east side of Ninth street from north line of Hoyt street to 100 feet south of south line of Hoyt street. Northern Pacific Terminal Co.

Ordinance No. 24704. Street railway track on Bybee avenue and Reed College Place. Reed Institute.

Ordinance No. 24892. Change from double track to single track on Raleigh street from 85 feet east of Twenty-fifth street to 90 feet east of Twenty-fourth street. Portland Railway, Light & Power Co.

Ordinance No. 25154. Spur track from point in block 32, East Portland, southeasterly across East Second street to East Flanders; thence easterly to a point between Union avenue and Grand avenue. Oregon-Washington Railway & Navigation Co.

Ordinance No. 25592. Railroad track across Tenth street and Pettygrove street. Spokane, Portland & Seattle Railway Co.

Ordinance No. 25643. Single track electric railway on Pettygrove street, Quimby street, Westover Road and Cumberland Road. Lewis-Wiley Hydraulic Co.

Ordinance No. 25776. Side track in front of block B, Creston (expires Aug. 21, 1913). Percy & Strickler Co.

Ordinance No. 25781. Electric railway on Lewelling avenue, Knapp avenue and Eschelman street. Fred A. Jacobs et al (See Ord. 25986).

Ordinance No. 25896 Single track railroad across Division street near Tenth street. Ford Motor Co.

Ordinance No. 26138. Railway track across Clackamas street 100 feet west of east line of block 45, Laurelhurst. Rose City Coal & Supply Co.

Ordinance No. 26246. Railway tracks across Northrup, Overton street and Tenth street connecting with block 224, Couch's Addition. Spokane, Portland & Seattle Railway Co.

Ordinance No. 26388. Side track on East First street in front of block 42, East Portland for accommodation of Portland Seed Co. Oregon & California Railway Co.

Ordinance No. 26395. Spur track from connection with block 32, East Portland, southeasterly across East Second and East Flanders, East Davis, East Everett, and East Couch streets. Oregon-Washington Railway & Navigation Co.

Ordinance No. 26461. Railway track on East Salmon street, East Ninth street and East Tenth street. Pacific Bridge Co.

Ordinance No. 26801. Railway track on Dekum avenue from East Thirteenth street to East Twenty-fourth street. Portland Railway, Light & Power Co.

Ordinance No. 27227. Spur track from point between Peninsular avenue and Calvert street to south line of block 56, Peninsular Addition No. 4. Oregon-Washington Railway & Navigation Co.

Ordinance No. 27660. Spur track on East First street between East Main street and East Salmon street for accommodation of Edlefsen Fuel Co. Oregon & California R. R. Co.

Ordinance No. 28347. Industrial spur track on East First street from a point six feet north of East Alder street to a point 216 feet south from beginning point. Oregon & California R. R. Co.

Ordinance No. 28348. Erect and maintain trolley poles through a tract of land owned by City of Portland at Palatine Hill. Portland, Eugene & Eastern Ry. Co.

Ordinance No. 28349. Industrial spur track on East First street from East Flanders street to East Burnside street. Southern Pacific Co.

Ordinance No. 28350. Industrial spur track on York street between Twenty-first and Twenty-second streets. M. F. Brady & Son.

Ordinance No. 28640. Switch cars on Stark street from Twelfth street to West Park street between 12 P. M. and 6 A. M. United Railways Co.

Ordinance No. 28655. Electric railway spur track across intersection of Third and Hoyt streets. Oregon & California R. R. Co.

Ordinance No. 28671. Operate freight trains on North Front street in the daytime. Spokane, Portland & Seattle Ry. Co.

Ordinance No. 28771. Railroad track to connect North Front street with Municipal Dock No. 1. Northern Pacific Terminal Co.

Ordinance No. 28790. Side track across Powell Valley Road near East Fiftieth street. A. M. Ellsworth, Receiver.

Ordinance No. 29361. Industrial railway track on East First street from East Pine street to East Stark street. O. & C. R. R. Co. & S. P. Co.

Ordinance No. 30368, entitled, "An Ordinance granting a revocable permit to Northern Pacific Terminal Company of Oregon, a corporation, to construct, lay down, use and maintain a standard gauge railway track in Front street from a point of connection with the present track in said Front street at or near the intersection of Front street with Seventeenth street, to Municipal Dock No. 1, in the City of Portland, and declaring an emergency." Passed by the Council April 16, 1915. Held by Northern Pacific Terminal Company of Oregon.

Ordinance No. 30968, entitled, "An Ordinance granting revocable permits to Oregon and California Railroad Company, its successors, lessees and assigns, to construct and maintain industrial railway spur tracks over, across and along certain streets in the vicinity of said Company's East Side Freight Yards in the City of Portland, Oregon, and fixing the conditions and restrictions governing said revocable permits." Passed by the Council October 6, 1915. Held by Oregon and California Railroad Company.

Ordinance No. 30276. Electric railway track on Cumberland Road. Lewis-Wiley Hydraulic Company.

Ordinance No. 30369. Standard gauge railway track in East Oak street between East First and East Water streets. Commission of Public Docks.

Ordinance No. 30422. Standard gauge railway track from a point in East First street between East Oak street and East Stark street

to trackage to Municipal Dock No. 2. Oregon & California Railroad Company.

Ordinance No. 30636. Standard gauge industrial spur track over and across East Ninth street and Division street. Oregon & California Railroad Company.

Ordinance No. 30743. Standard gauge spur track in East Second street from north line of East Ankeny street to a point 120 feet north therefrom. Spokane-Portland & Seattle Railway Company and Oregon-Washington Railroad & Navigation Co.

Ordinance No. 30854. Standard gauge railway track in Front street from Seventeenth street to Municipal Dock No. 1. Northern Pacific Terminal Company.

PORTE COCHERE, AWNINGS, ETC.

Ordinance No. 11735. Porte Cochere over Alder street entrance of Meier & Frank Co. Meier & Frank Co.

Ordinance No. 13645. Porte Cochere over sidewalk at 149 Seventh street. L. E. Hamilton.

Ordinance No. 13909. Porte Cochere at 126 Sixth street. Bijou Theatre Co.

Ordinance No. 14394. (See Stairways.)

Ordinance No. 14584. Two Porte Cochere in front of Hotel Belvidere at Fourth and Alder streets. F. Stroebel & Co.

Ordinance No. 14758. Porte Cochere on Stark street between Seventh and Park streets. Wright Dickinson Co.

Ordinance No. 17714. Porte Cochere in front of 311 Alder street and 128 Sixth street. Strobel & Barenstecher.

Ordinance No. 17865. Porte Cochere in front of 131 Sixth street. Bakeronian Amusement Co.

Ordinance No. 21413. Wire glass awnings on buildings constructed on blocks 138 and 141, Couch's Addition. Fidelity Investment Co.

Ordinance No. 26254. Marquise entrance on building on Fourth street known as Dekum Annex. Circle Amusement Co.

Ordinance No. 26672. Marquise on south side of building located on lot 1, block 91, Couch's Addition. Wadhams & Kerr Bros.

Ordinance No. 26892. Marquise at northeast corner of Third and Alder streets. Owners.

Ordinance No. 26904. Marquise in front of theater on lot 7, block 175. Rector Realty Co.

Ordinance No. 28269. Marquise at southeast corner of Thirteenth and Hoyt streets. Ella Eisenbach.

Ordinance No. 30932. Marquise on warehouse at Fifteenth and Overton streets. Mason-Ehrman Company.

SIDEWALKS, BRIDGES AND STAIRWAYS

Ordinance No. 12082. Elevated bridge across Front street at Seventeenth street. J. A. Martin & Co.

Ordinance No. 13181. Raised sidewalk on Thirteenth street in front of lots 5 and 8, block 137, Couch's Addition. M. Seller & Co.

Ordinance No. 13511. Open stairway on Park street in front of lot 1, Park block 3. L. Therkelsen.

Ordinance No. 13761. Open stairway on Yamhill street in front of lot 5, block 251. J. D. Brown.

Ordinance No. 14088. Elevated sidewalk in front of lots 6 and 7, Block 136, Couch's Addition. Pacific Grain Co.

Ordinance No. 14394. Stairway and Porte Cochere in front of lot 1, south one-half of block 85, Portland. Western American Co.

Ordinance No. 14593. Open stairway on Fourteenth street in front of lot 1, block 312. Robert Wilson.

Ordinance No. 15008. Raised sidewalk in front of east 100 feet of south one-half of block 184, Couch's Addition. John A. Roeblings Sons Co.

Ordinance No. 15458. Stairway on Jefferson street near Second street. Meier & Frank Co.

Ordinance No. 15670. Stairway to basement of building on east side of Fourteenth street, 100 feet north of Washington street. Edgar M. Lazarus.

Ordinance No. 15723. Raised sidewalk on East Salmon street in front of lots 1 and 8 in block 134, Hawthorne Park. Crystal Ice & Storage Co.

Ordinance No. 15996. Steps from sidewalk on east side of Williams avenue 36 feet south of south line of Clackamas street. A. F. Swenson & Co.

Ordinance No. 16884. Elevated sidewalk on Third, Fourth and Hoyt streets in front of north one-half of block "O," Portland. Jos. & Sam Simon.

Ordinance No. 16887. Raised sidewalk on East Second street in front of lots 1, 2, 3 and 4, block 58, East Portland. Mitchell, Lewis & Staver Co.

Ordinance No. 17038. Elevated sidewalk on north side of Holladay avenue between 750 feet and 800 feet west of west line of East Twenty-eighth street. Blake-McFall Co.

Ordinance No. 17395. Vent in sidewalk on east side of Fifth street 40 feet south of Morrison street. H. W. Corbett Estate.

Ordinance No. 18965. Elevated sidewalk in front of lots 1 and 4, block 27, Watson's Addition. Carman Manufacturing Co.

Ordinance No. 19061. Elevated sidewalk in front of lot 2, block 204, Couch's Addition. F. V. Holman.

Ordinance No. 19177. Elevated sidewalk on east side of Thirteenth street between Davis and Everett streets. W. P. Fuller Co.

Ordinance No. 19984. Elevated sidewalk along Fifteenth street in front of lot 8, block 140, Couch's Addition. Owners.

Ordinance No. 19985. Elevated sidewalk along Fifteenth street in front of lot 7, block 183, Couch's Addition. Owners.

Ordinance No. 20831. Elevated sidewalk on East First street in front of lots 5 and 6, block 18, East Portland. Owners.

Ordinance No. 21414. Elevated sidewalk on east side of Fifteenth street between Johnson and Lovejoy streets. Fidelity Investment Co.

Ordinance No. 22302. Open stairway on Park street leading into Medical Building. F. O. Downing.

Ordinance No. 22633. Elevated plank roadway on north side of East Alder street between East Water street and Willamette River, including standard gauge track thereon. Nickum & Kelly.

Ordinance No. 22858. Elevated sidewalk on East Second street between East Morrison and East Alder streets. John Deere Plow Co.

Ordinance No. 22962. Elevated sidewalk on East Stark street from 50 feet east of East Water street to 100 feet east of East Water street. Owner of lot 1, block 21, East Portland.

Ordinance No. 24907. Elevated sidewalk on Eighteenth street be-

tween Thurman and Upshur streets. Owner lot 5, block 21, Watson's Addition.

Ordinance No. 25222. Elevated platform in front of pier 4, Broadway bridge. Albers Bros. Milling Co.

Ordinance No. 25670. Elevated platform at northwest corner of Fifteenth and Kearney streets. A. N. Moores.

Ordinance No. 26151. Elevated platform at southwest corner of Fifteenth and Hoyt streets. Multnomah Building Co.

Ordinance No. 26232. Elevated platform in front of lot 1, block 2, Blackistone's Addition. Macleay Estate Co.

Ordinance No. 26233. Elevated platform in front of lot 1, block 3, Blackistone's Addition. Macleay Estate Co.

Ordinance No. 26394. Elevated platform in front of lots 1 and 4, block 91, Couch's Addition. Wadhams & Kerr Bros.

Ordinance No. 27661. Elevated platform on east side of Fifteenth street between Thurman and Savier streets. Owners of lots 6 and 7, block 13, Watson's Addition.

Ordinance No. 27802. Wooden platform on south side of Irving street between Fifth and Sixth streets. Lutke Manufacturing Co.

Ordinance No. 28074. Elevated walk near northwest corner of Seventeenth and Upshur streets. Bridge & Beach Manufacturing Co.

Ordinance No. 28380. Wooden stairway on Occident street near Oregon street. Southern Pacific Co.

Ordinance No. 28636. Elevated platform in front of lots 6 and 7, block 99, Couch Addition. W. P. Crawford.

Ordinance No. 28832. Elevated platform in front of lots 1 and 2, block 44, East Portland. D. P. Thompson Co.

Ordinance No. 28940. Elevated platform on York street near Twenty-second street. W. M. Brady.

Ordinance No. 29186. Elevated platform on west side of Thirteenth street between Flanders and Glisan streets. The Goodyear Tire & Rubber Co.

Ordinance No. 29187. Trestle driveway on East Madison street west of East Water street.

Ordinance No. 29726. Elevated wooden sidewalk on east side of Second street north of Belmont street. Owner of lots 3 and 4, block 58, East Portland.

Ordinance No. 30406. Elevated platform in Harrison street, 150 feet east of Water street. Portland Lumber Company.

Ordinance No. 30451. Elevated platform on north side of East Ankeny street, between East Second and East Third streets. Oscar A. Heintz.

Ordinance No. 30632. Elevated wooden sidewalk on Fifteenth street in front of lot 5, block 121, Couch Addition. D. P. Thompson Company.

Ordinance No. 30834. Elevated platform on west side of Fifteenth street, at Overton street, in front of block 212, Couch's Addition. Mason-Ehrman & Company.

Ordinance No. 30933. Elevated roadway and platform in East Pine street, adjacent to block 23, East Portland. Standard Box and Lumber Company.

FUEL OIL AND GASOLINE STORAGE

Ordinance No. 15101. Fuel oil tank at southwest corner of Sixth and Oak streets. Wells Fargo & Co.

Ordinance No. 16518. Gasoline tank at southwest corner of Sixteenth and Alder streets. Portland Motor Car Co.

Ordinance No. 16572. Gasoline tank on East Third street between East Ash and East Ankeny streets. Herman Enke.

Ordinance No. 17001. Fuel oil tank in front of lot 2, Park block 2, on west side of Park street between Washington and Alder streets. C. W. Cornelius.

Ordinance No. 17037. Two fuel oil tanks on east side of Fifth street between 64 feet and 84 feet south of south line of Morrison street. H. W. Corbett Estate.

Ordinance No. 17358. Two tanks for storage of lubricating oils under sidewalk on Thirteenth street in front of lots 2 and 3, block 18, Couch's Addition. W. P. Fuller & Co.

Ordinance No. 17617. Oil tank on block 7, Couch's Addition. Portland Gas Co.

Ordinance No. 17713. Fuel oil tank in Seventh street in front of lots 6 and 7, north one-half of block 85, Portland. Beck Investment Co.

Ordinance No. 18207. Fuel oil tank on south one-half of block 8, East Portland. Warren Bros. Co.

Ordinance No. 18525. Two fuel oil tanks under east sidewalk on Sixth street between Morrison and Alder streets. Meier & Frank Co.

Ordinance No. 18708. Fuel oil tank on west side of Fifteenth street 75 feet south of south line of Glisan street. Lipman, Wolfe & co.

Ordinance No. 19137. Fuel oil tank on west side of East Sixth street 100 feet south of East Taylor street. Neustadter Bros.

Ordinance No. 19178. Fuel oil tank on north side of Broadway, 75 feet west of Grand avenue. State Laundry.

Ordinance No. 19259. Fuel oil tank on east side of Fourth street, 50 feet north of Stark street. Owners of Chamber of Commerce Bldg.

Ordinance No. 19602. Fuel oil tank on East Yamhill street, between Grand avenue and East Sixth street. United States Laundry Co.

Ordinance No. 20144. Fuel oil tank on East Water between East Washington street and East Stark street. National Cold Storage & Ice Co.

Ordinance No. 20556. Fuel oil tank, east side of Seventh street, 100 feet north of north line of Washington street. Imperial Hotel Co.

Ordinance No. 20695. Fuel oil tank on west side of Second street, 30 feet north of Everett street. Opera House Laundry Co.

Ordinance No. 20699. Fuel oil tank in West Park street, between Taylor and Salmon streets. Arlington Club.

Ordinance No. 20944. Two fuel oil tanks on west side of Third street, 90 feet north of Washington street. Jas. Stewart & Co.

Ordinance No. 20945. Fuel oil tank on Alder street, 80 feet west of Fourth street. Morgan, Fliedner & Boyce.

Ordinance No. 21149. Fuel oil tank on north side of East Everett street, 75 feet east of East Tenth street. Palace Laundry Co.

Ordinance No. 21926. Fuel oil tank on north side Belmont street, 100 feet east of East Seventh street. New York Bakery Co.

Ordinance No. 22044. Fuel oil tank on Alder street, between Fourth and Fifth streets. J. B. Yeon.

Ordinance No. 22051. Fuel oil tank on northeast corner of Twenty-first and Irving streets. S. B. Barker.

Ordinance No. 22294. Fuel oil tank under sidewalk on Yamhill street, 50 feet east of east line of Third street. Donald Mackay.

Ordinance No. 22330. Fuel oil tank on Sixth street, between Taylor and Yamhill streets. Y. M. C. A.

Ordinance No. 22532. Fuel oil tank on lots 6 and 7, block 2, Sherlock's Addition. Cocoanut Products Co.

Ordinance No. 22535. Fuel oil tank in front of lots 5 and 6, block 318, Couch's Addition. Albers Bros. Milling Co.

Ordinance No. 22614. Fuel oil tank in front of west 50 feet of lots 5 and 6, block 220, Portland. F. M. Warren.

Ordinance No. 22615. Fuel oil tank on west side of Sixth street, 100 feet south of Alder street. Ben Selling.

Ordinance No. 22859. Fuel oil tank on Seventeenth street, 112 feet south of south line of Raleigh street. Stein Bros.

Ordinance No. 22863. Fuel oil tank on south side of Jefferson street at southeast corner of Thirteenth street. Carmelita Apartments.

Ordinance No. 22864. Fuel oil tank in front of 43 Trinity Place. Trinity Place Investment Co.

Ordinance No. 22977. Fuel oil tank on East Water street, 5 feet north of East Washington street. Charles Smith.

Ordinance No. 22978. Fuel oil tank on block 11, East Portland. O'Reilly and Burpee.

Ordinance No. 23040. Fuel oil tank at northwest corner of Sixth and Alder streets. "The Oregonian."

Ordinance No. 23041. Fuel oil tank at southwest corner of Burnside and Fourteenth streets. I. Lowengart.

Ordinance No. 23140. Fuel oil tank at southwest corner of Sixth and Washington streets. T. B. Wilcox.

Ordinance No. 23141. Fuel oil tank on west side of East Ninth street, 80 feet north of East Yamhill street. Oregon Packing Co.

Ordinance No. 23231. Fuel oil tank on west side of Seventh street, 100 feet north of Mill street. School District No. 1.

Ordinance No. 23232. Fuel oil tank on East Clay street in front of lot 4, block 80, Stephens Addition. National Laundry Co.

Ordinance No. 23545. Fuel oil tank in front of 789 Northrup street. H. C. Stevens.

Ordinance No. 23546. Fuel oil tank on southwest corner of East Davis and East Sixth streets. F. F. Haradon & Son.

Ordinance No. 23548. Fuel oil tank on north side of Hawthorne avenue, 80 feet west of Grand avenue. E. A. Baldwin.

Ordinance No. 23631. Fuel oil tank on west side of Fifth street, 80 feet north of north line of Oak street. Portland Commercial Club.

Ordinance No. 23632. Fuel oil tank on east side of North Tenth street, 40 feet north of the north line of Burnside street. Z. Swett et al.

Ordinance No. 23788. Fuel oil tank at southwest corner of Twelfth and Taylor streets. Fred Fritz.

Ordinance No. 23789. Fuel oil tank on lot 4, block 134, City of Portland. Edward Holman.

Ordinance No. 23790. Fuel oil tank on west side of Sixth street, 40 feet north of Washington street. H. E. Wood and E. R. Pittelkau.

Ordinance No. 23792. Fuel oil tank on East Ninth street, 80 feet north of Schuyler street. P. J. McDonalds.

Ordinance No. 23793. Fuel oil tank in front of 432 Hawthorne avenue. Damascus Creamery.

Ordinance No. 23794. Fuel oil tank at foot of Tenth street. Balfour-Guthrie Co.

Ordinance No. 23803. Fuel oil tank at northeast corner of Marion avenue and East Ninth street. Mt. Hood Brewing Co.

Ordinance No. 23805. Fuel oil tank at northwest corner of East Stark and East Thirteenth streets. Enterprise Bakery.

Ordinance No. 23806. Fuel oil tank at northeast corner of Park and Morrison streets. Joseph Healey.

Ordinance No. 23932. Fuel oil tank, southwest corner Third and Washington streets. Sweeny Investment Co.

Ordinance No. 23933. Fuel oil tank east side of North Twenty-second street, 85 feet north of north line of Glisan street. M. Ballay.

Ordinance No. 24026. Fuel oil tank at southwest corner of Third and Oak streets. Wm. Sherlock Co.

Ordinance No. 24027. Fuel oil tank at southeast corner of Oak and Third streets. Portland Trust Co.

Ordinance No. 24094. Fuel oil tank at southeast corner of Hooker street and Southern Pacific right of way. Multnomah County.

Ordinance No. 24095. Fuel oil tank on south side Washington street, 80 feet west of Fifth street. Corbett Estate et al.

Ordinance No. 24097. Fuel oil tank on west side of Twenty-first street, 50 feet south of Washington street. Covey Motor Car Co.

Ordinance No. 24109. Fuel oil tank on north side of Davis street, 90 feet east of Third street. R. R. Thompson Estate Co.

Ordinance No. 24110. Fuel oil tank at southeast corner of East Eleventh and East Flanders streets. Franz Bros.

Ordinance No. 24111. Fuel oil tank south side of Ash street, 30 feet west of Third street. R. R. Thompson Estate Co.

Ordinance No. 24330. Fuel oil tank at southeast corner of St. Clair and Washington streets. Mrs. E. J. Frohman.

Ordinance No. 24341. Fuel oil tank on west side of Twelfth street in front of lot 1, block 107, Couch's Addition. H. J. Ottenheimer.

Ordinance No. 24398. Fuel oil tank on east side of Ninth street at intersection of Irving street, vacated. Northern Pacific Terminal Co.

Ordinance No. 24399. Fuel oil tank on north side of East Oak street, 75 feet east of East Sixth street. International Laundry Co.

Ordinance No. 24400. Fuel oil tank on east side of West Park street, 80 feet north of Alder street. L. G. Clarke and W. F. Woodward.

Ordinance No. 24401. Fuel oil tank on east side of Twelfth street, 75 feet north of Washington street. Cramer & Fries.

Ordinance No. 24496. Fuel oil tank on north side of East Flanders street, between Union avenue and East Third street. E. Henry Wemme.

Ordinance No. 24497. Fuel oil tank on north side of Washington street, 60 feet west of west line of Fifth street. Estate of Stephen Meade.

Ordinance No. 24498. Fuel oil tank on north side of Washington street, 85 feet east of east line of Twentieth street. Mrs. P. M. Dekum.

Ordinance No. 24635. Fuel oil tank on east side of Third street, 50 feet south of south line of Washington street. W. C. Alvord, Agt.

Ordinance No. 24636. Fuel oil tank on south side of East Davis street, 90 feet west of west line of Union avenue. W. O. Jackson.

Ordinance No. 24637. Fuel oil tank at southeast corner of Seventh and Yamhill streets. Journal Publishing Co.

Ordinance No. 24787. Fuel oil tank on north side of Taylor street, 150 feet west of Seventh street. Heilig Theater Co.

Ordinance No. 24826. Fuel oil tank at northeast corner of East Twenty-first and East Glisan streets. Crystal Laundry Co.

Ordinance No. 24996. Fuel oil tank at northwest corner of Twentieth and Kearney streets. R. F. Wassell.

Ordinance No. 24997. Fuel oil tank at northwest corner of East Fifteenth and Belmont streets. Bailey, Taylor & Lambert.

Ordinance No. 25068. Fuel oil tank at southeast corner of First and Multnomah streets. M. Olsen.

Ordinance No. 25213. Fuel oil tank at southwest corner of East Twenty-first and Irving streets. House of Good Shepherd.

Ordinance No. 25396. Fuel oil tank on block 19, Riverside Homestead. Portland Railway, Light & Power Co.

Ordinance No. 25397. Fuel oil tank at southwest corner of Tenth and Stark streets. Crown Trust Co.

Ordinance No. 25398. Fuel oil tank at southwest corner of Seventh and Oak streets. S. Benson.

Ordinance No. 25426. Fuel oil tank in front of 26 North Fifteenth street. Laher Auto Spring Co.

Ordinance No. 25473. Fuel oil tank at southeast corner of Twenty-third and Hoyt streets. Wright Investment Co.

Ordinance No. 25474. Fuel oil tank at southeast corner of Fifth and Alder streets. Failing Estate.

Ordinance No. 25475. Fuel oil tank in front of 178 Hooker street. School Board.

Ordinance No. 25499. Fuel oil tank on north side of Yamhill street, 80 feet west of the west line of Lownsdale street. Rufus Mallory.

Ordinance No. 25589. Fuel oil tank at 206 Porter street. Miss A. R. Rundle.

Ordinance No. 25590. Fuel oil tank at northeast corner of East Couch street and Union avenue. Chambers & Widmer.

Ordinance No. 25738. Fuel oil tank on west side of Front street, 60 feet south of southerly line of Nicolai street. Portland Railway, Light & Power Co.

Ordinance No. 25739. Two fuel oil tanks on west side of Tenth street, between Pettygrove and Quimby streets. Spokane, Portland & Seattle Co.

Ordinance No. 25824. Gasoline tank on north side of Ankeny street, between Fourth and Fifth streets. Pacific Paper Co.

Ordinance No. 25825. Fuel oil tank on east side of East Third street, 215 feet north of the north line of East Glisan street. American Laundry Co.

Ordinance No. 25826. Fuel oil tank on south side of Yamhill street, 20 feet west of Tenth street. Multnomah County Library Association.

Ordinance No. 25827. Fuel oil tank on east side of Thirteenth street, 60 feet north of Alder street. Mrs. H. Rieman.

Ordinance No. 25841. Gasoline filling station at 1063 Hawthorne avenue. H. O. Peck.

Ordinance No. 25842. Gasoline filling station at northwest corner of Twenty-third street and Cornell road. Portland Motor Car Co.

Ordinance No. 25897. Fuel oil tank at 644 Lovejoy street. Barrett Estate.

Ordinance No. 25978. Fuel oil tank at 531 East Thirteenth street. Star Drilling Machine Co.

Ordinance No. 25979. Fuel oil tank at 209 North Thirteenth street. Edward Campbell.

Ordinance No. 26049. Fuel oil tank on block "Z," Westover Terrace. Central Heating Co.

Ordinance No. 26050. Fuel oil tank on west side of East Eleventh street, between East Alder and East Morrison streets. J. D. Wharton.

Ordinance No. 26051. Fuel oil tank at 64-66 Trinity Place. Metropolitan Investment & Imp. Co.

Ordinance No. 26135. Fuel oil tank at northeast corner of Second and Yamhill streets. Strowbridge Estate.

Ordinance No. 26214. Fuel oil tank at northeast corner of Fifth and Columbia streets. Amelia C. Seeley.

Ordinance No. 26299. Fuel oil tank at southeast corner of East Thirteenth and East Ash streets. Owner Lots 1 and 2, Block 279, Aiken's Addition.

Ordinance No. 26300. Fuel oil tank at northwest corner of Thirteenth and Davis streets. Wadhams & Kerr Bros.

Ordinance No. 26301. Fuel oil tank at northwest corner of Seventh and Morrison streets. Multnomah Security Co.

Ordinance No. 26302. Gasoline filling station at southeast corner of East Eighth and Hawthorne avenue. Paquet Garage Co.

Ordinance No. 26303. Fuel oil tank at northeast corner of Sixth and Jefferson streets. University Club.

Ordinance No. 26430. Gasoline filling station at 717 Hawthorne avenue. Auto Truck Service Co.

Ordinance No. 26431. Gasoline filling station at northeast corner of Alder and Lownsdale streets. Oregon Auto Exchange.

Ordinance No. 26432. Gasoline filling station at southeast corner of East Seventh and East Ankeny streets. Tyrell & King Transportation Co.

Ordinance No. 26628. Fuel oil tank at southeast corner of East Thirty-seventh and Belmont streets. J. M. Wallace and P. Schuele.

Ordinance No. 26725. Fuel oil tank at 2-4 North Front street. Spaulding Estate.

Ordinance No. 26726. Fuel oil tank at southwest corner of Seventh and Washington streets. Morgan Bushong Investment Co.

Ordinance No. 26727. Fuel oil tank at northeast corner of Seventh and Burnside streets. Matichner Bros.

Ordinance No. 26794. Fuel oil tank at southwest corner of Third and Flanders streets. Otto W. Nelson.

Ordinance No. 26795. Gasoline filling station at northwest corner of Broadway and Burnside streets. E. H. Wemme.

Ordinance No. 26796. Gasoline filling station at 374 Wasco street. Ralph B. Lloyd.

Ordinance No. 26887. Gasoline filling station at northeast corner of Thirteenth and Hawthorne avenue. Kadderly and Francis.

Ordinance No. 26888. Fuel oil tank at northeast corner of East Pine and East Tenth streets. Troy Laundry Co.

Ordinance No. 26889. Gasoline filling station at northeast corner of East Fifteenth and Broadway. Povey Brothers.

Ordinance No. 26890. Fuel oil tank at 632 Tillamook street. F. E. Bowman Co.

Ordinance No. 26949. Gasoline filling station at northwest corner of Sixth and Oak streets. Portland Railway, Light & Power Co.

Ordinance No. 26950. Gasoline filling station at 192½ Fourth street. Central Investment Co.

Ordinance No. 27066. Fuel oil tank at 57 Lucretia Place. S. Silverfield.

Ordinance No. 27067. Gasoline filling station at 364 Ross street. Bell Maham.

Ordinance No. 27068. Gasoline filling station at northeast corner of Front and Ankeny streets. Spaulding Estate.

Ordinance No. 27131. Fuel oil tank at northwest corner of Thirteenth and Salmon streets. I. M. Buell.

Ordinance No. 27209. Fuel oil tank at southwest corner of East Eleventh and East Flanders streets. J. W. Vogan.

Ordinance No. 27213. Four oil intakes and pipes in Stark street, between West Park and Tenth streets. Northwestern Electric Co.

Ordinance No. 27238. Gasoline filling station on west side of Williams avenue, between Failing and Shaver streets. J. N. Muzzy.

Ordinance No. 27430. Fuel oil tank on north side of Marshall street, 160 feet east of Twenty-third street. Good Samaritan Hospital Co.

Ordinance No. 27446. Gasoline filling station at 229 Salmon street. T. H. Richardson.

Ordinance No. 27447. Fuel oil tank at northeast corner of Third and Couch streets. A. C. Pike.

Ordinance No. 27448. Gasoline filling station at 1152 Belmont street. John Eder.

Ordinance No. 27505. Gasoline filling station at 760 Halsey street. J. Wood Smith.

Ordinance No. 27547. Gasoline filling station at northeast corner of Couch and Broadway. C. Henri Labbe.

Ordinance No. 27548. Fuel oil tank at southwest corner of East Thirteenth and East Morrison streets. R. F. Wassell & Co.

Ordinance No. 27589. Fuel oil tank at northeast corner of Morrison and Broadway. Northwestern National Bank.

Ordinance No. 27590. Gasoline filling station at 190 Chapman street. John McKinney.

Ordinance No. 27650. Fuel oil tank at northeast corner of Third and Alder streets. Fred Fritz.

Ordinance No. 27651. Fuel oil tank at southwest corner of Eighteenth and Flanders streets. W. R. Griffith.

Ordinance No. 27688. Gasoline filling station at 708 Division street. Augusta Jahnke.

Ordinance No. 27774. Fuel oil tank at East Eighth and Burnside streets. Page Investment Co.

Ordinance No. 27775. Gasoline filling station corner East Forty-fifth and Sandy Boulevard. Hartman & Thompson.

Ordinance No. 27776. Fuel oil tank at Park and Oak streets. Pacific Telephone & Telegraph Co.

Ordinance No. 27777. Gasoline filling station at 368 Union avenue. Fred K. Viereck.

Ordinance No. 27835. Fuel oil tank at Fourth and Alder streets. Henry Weinhard Estate.

Ordinance No. 27836. Fuel oil tank at East Sixteenth and Weidler streets. Charles Frazier.

Ordinance No. 27837. Fuel oil tank at West Park and Washington streets. T. B. Wilcox.

Ordinance No. 27838. Gasoline filling station at Broadway and Couch streets. C. Henri Labbe.

Ordinance No. 27880. Gasoline filling station at 207 East Sixth street North. Geo. W. Bracey.

Ordinance No. 27921. Fuel oil tank at Tenth and Hall streets. W. L. Woods.

Ordinance No. 27963. Fuel oil tank at 3 First street. Biddle, Thompson & Kelly.

Ordinance No. 27992. Fuel oil tank at Grand avenue and East Burnside streets. C. W. Williamson.

Ordinance No. 28029. Gasoline filling station at 840 Mississippi avenue. A. L. Sauvie.

Ordinance No. 28052. Eight fuel oil tanks at Tenth, between Stark and Washington streets. Northwestern Electric Co.

Ordinance No. 28070. Fuel oil tank at Sixth and Irving streets. J. M. James Estate.

Ordinance No. 28113. Fuel oil tank at Williams avenue and Stanton street. A. Christie.

Ordinance No. 28114. Gasoline filling station at East Twenty-fourth street and Broadway. J. C. Baird.

Ordinance No. 28264. Gasoline filling station at 127 Broadway. Ralph Hoyt.

Ordinance No. 28265. Gasoline filling station at 181 Sixth street Corbett Estate.

Ordinance No. 28266. Gasoline filling station at 314 East Morrison street. J. S. Beall.

Ordinance No. 28267. Gasoline filling station at 995 Hawthorne avenue. J. D. Harms.

Ordinance No. 28298. Gasoline filling station at northeast corner of East Thirty-eighth street and Sandy Boulevard. A. Spier.

Ordinance No. 28299. Gasoline filling station at 15 North Ninth street. E. Meyers.

Ordinance No. 28345. Gasoline filling station at southwest corner of East Water and East Madison streets. O'Reiley and Burpee.

Ordinance No. 28346. Fuel oil tank at southwest corner of East Eleventh and Division streets. Ford Motor Co.

Ordinance No. 28392. Gasoline filling station at 1610 East Thirteenth street. D. M. Donaugh.

Ordinance No. 28393. Fuel oil tank at northwest corner of Tenth and Hall streets. W. L. Woods.

Ordinance No. 28497. Gasoline filling station at 12 Second street. Biddle, Thompson & Kelly.

Ordinance No. 28498. Gasoline filling station at southeast corner of Sixteenth and Alder streets. Leslie Scott.

Ordinance No. 28499. Gasoline filling station at 128½ Broadway. McGinn Estate.

Ordinance No. 28550. Gasoline tank at 430 Hawthorne avenue. Peter and Andrew Vetsch.

Ordinance No. 28589. Gasoline filling station at southeast corner of East Second and Broadway. R. J. O'Neil.

Ordinance No. 28590. Fuel oil tank at southeast corner East Twenty-third and East Irving streets. E. M. Rasmussen & Son.

Ordinance No. 28591. Gasoline filling station at 478 East Eleventh street. Milton Hager.

Ordinance No. 28605. Gasoline filling station at 886 Union avenue North. C. A. Colfelt.

Ordinance No. 28606. Gasoline filling station at 191 Fourth street. L. B. Menefee.

Ordinance No. 28650. Gasoline filling station at 726 Division street. Martin Fromme.

Ordinance No. 28700. Gasoline filling station at 526 Alder street. H. E. Coleman.

Ordinance No. 28701. Gasoline filling station at 704 Kearney street. Wm. Reidt.

Ordinance No. 28747. Gasoline filling station at 335 Ankeny street. C. A. Malarkey.

Ordinance No. 28830. Gasoline filling station at southeast corner of Tenino avenue and East Seventeenth street. W. W. Wing and W. F. Neild.

Ordinance No. 28831. Fuel oil tank at southwest corner of Second and Everett streets. A. J. Peaper.

Ordinance No. 28860. Gasoline filling station at 431 East Eleventh street. H. P. Whitman.

Ordinance No. 28861. Gasoline filling station at 188 Chapman street. John McKinney.

Ordinance No. 28862. Fuel oil tank in front of lot 1, block 154. East Portland. Herman Enke.

Ordinance No. 28863. Gasoline filling station at 357 Burnside street. M. Rothfos.

Ordinance No. 28884. Gasoline filling station at 495 Alder street. Jos. Bergman.

Ordinance No. 28885. Gasoline filling station at 244 Second street. College Endowment Association.

Ordinance No. 28934. Gasoline filling station at 1614 East Seventeenth street. Alex. and Minnie Campbell.

Ordinance No. 28935. Gasoline filling station at 93 North Park street. D. S. Williams and Jas. Beggs.

Ordinance No. 28936. Gasoline filling station at 67 Sixth street. Corbett estate.

Ordinance No. 28937. Gasoline filling station at 755 Belmont street. Bella P. Dailey.

Ordinance No. 28938. Gasoline filling station at southeast corner of Fourteenth and Burnside streets. Paul Van Fridagh.

Ordinance No. 28939. Gasoline filling station at 335 Burnside street. John and Jos. Matschiner.

Ordinance No. 28968. Gasoline filling station at 10 Broadway. C. A. Malarkey.

Ordinance No. 28969. Gasoline filling station at 1043 Williams avenue. Lumsden Estate.

Ordinance No. 28976. Fuel oil tank at northwest corner East Water and East Madison streets. S. P. & S. Ry Co.

Ordinance No. 29009. Gasoline filling station at 103 East Water street. Ladd Estate Co.

Ordinance No. 29073. Gasoline filling station at southeast corner Knott street and Williams avenue. T. W. B. London.

Ordinance No. 29074. Gasoline filling station at 993 Belmont street. W. M. Bradford.

Ordinance No. 29075. Gasoline filling station at northwest corner of East Stark and East Twenty-ninth streets. W. B. Smith.

Ordinance No. 29110. Gasoline filling station at 335 North Seventeenth street. Ned Munger.

Ordinance No. 29101. Fuel oil tank at 145 Monroe street. Mrs. W. A. Thompson.

Ordinance No. 29127. Gasoline filling station at 42 Third street. R. R. Thompson Estate.

Ordinance No. 29128. Gasoline filling station at 209 Front street. Fletcher Linn.

Ordinance No. 29129. Fuel oil tank at northeast corner of East Thirty-seventh and East Market streets. Mrs. Burdette.

Ordinance No. 29156. Fuel oil tank at northeast corner of East Fifty-fourth street and Sandy Boulevard. Sisters of the Holy Child.

Ordinance No. 29157. Fuel oil tank at 1092½ Hawthorne avenue. Rudolph Christman.

Ordinance No. 29212. Gasoline filling station at 361 East Eleventh street. I. F. Beales.

Ordinance No. 29213. Gasoline filling station at southeast corner of East Tenth street and East Burnside street. D. C. Powell.

Ordinance No. 29214. Gasoline filling station at 340 Oregon street. Thomas Farrell.

Ordinance No. 29215. Gasoline filling station at 429 Belmont street. Jessie B. Dawley.

Ordinance No. 29216. Gasoline filling station at southeast corner of Willamette Boulevard and Gay street. Peter Schnell.

Ordinance No. 29217. Fuel oil tank at northeast corner of Nineteenth and Lovejoy streets. Royal Arms Co.

Ordinance No. 29236. Fuel oil tank at southeast corner of First and Main streets. Jos. Clossett.

Ordinance No. 29237. Gasoline filling station at 1733 Derby street. Huesner and Heisler.

Ordinance No. 29241. Fuel oil tank at southeast corner of Nineteenth and Marshall streets. Jos. Simon.

Ordinance No. 29242. Fuel oil tank at southeast corner of Ninth and Flanders streets. City Laundry Co.

Ordinance No. 29243. Gasoline filling station at 1254 Belmont street. Mike Arndt.

Ordinance No. 29244. Gasoline filling station at 506 Williams avenue. J. Johnston.

Ordinance No. 29248. Gasoline filling station at 209 Fourth street. H. J. Morrison.

Ordinance No. 29249. Gasoline filling station at 269 Sixteenth street. John H. Montgomery.

Ordinance No. 29266. Gasoline filling station at 266 Eleventh street. W. S. Biddle.

Ordinance No. 29301. Gasoline filling station at 434 Alder street. D. P. Thompson Estate Co.

Ordinance No. 29327. Fuel oil tank at northwest corner of East Twenty-fourth street and Sandy Boulevard. E. M. Rasmussen & Son, Inc.

Ordinance No. 29328. Gasoline filling station at 409 Williams avenue. E. V. Berwick.

Ordinance No. 29413. Fuel oil tank at 262 Park street. M. and A. Shogren.

Ordinance No. 29414. Fuel oil tank at northwest corner of Twentieth and Marshall streets. Mary E. Couch.

Ordinance No. 29415. Fuel oil tank at 429 Harrison street. H. D. Triplett.

Ordinance No. 29480. Gasoline filling station at 1372 Division street. C. W. Eiler.

Ordinance No. 29652. Gasoline filling station in front of lot 5, block 7, Etna Addition. Thomas Edwards.

Ordinance No. 29592. Fuel oil tank at 250 Twelfth street. I. L. Harper.

Ordinance No. 29593. Fuel oil tank at 273 Salmon street. A. & C. Feldenheimer.

Ordinance No. 29630. Fuel oil tank at 656 Flanders street. O. J. Sherman.

Ordinance No. 29631. Fuel oil tank at Imperial Heights. H. L. Pittock.

Ordinance No. 29658. Fuel oil tank at 91 East Fourteenth street. School District No. 1.

Ordinance No. 29659. Fuel oil tank at 561 East Alder street. School District No. 1.

Ordinance No. 29660. Fuel oil tank at 1040 East Ankeny street. H. R. Albee.

Ordinance No. 29661. Fuel oil tank at 26½ Twentieth street North. Clara N. Hall.

Ordinance No. 29662. Fuel oil tank at 925 The Crescent. H. J. & L. D. Murphy.

Ordinance No. 29663. Fuel oil tank at 281 East Salmon street. Security Savings & Trust Co.

Ordinance No. 29664. Fuel oil tank at 291 East Salmon street. Security Savings & Trust Co.

Ordinance No. 29665. Fuel oil tank at 278 East Salmon street. Columbia Contract Co.

Ordinance No. 29666. Gasoline filling station at 754 East Morrison street. Bella P. Dailey.

Ordinance No. 29696. Gasoline filling station at 552 Union avenue North. B. Ehlinger.

Ordinance No. 29697. Gasoline filling station at 369 Hawthorne avenue. Ambrose Scott.

Ordinance No. 29699. Gasoline filling station at southeast corner of East Twelfth and East Burnside streets. Adolph A. Dekum.

GASOLINE STORAGE AND FUEL OIL TANKS
UNDER THE PROVISIONS OF ORDINANCE NO. 29891

Location	Date	Granted to
409½ East Burnside St	1-20-15	O. G. Holmes
Twenty-third St., in front of lot 2, block 13, King's 2nd Add	1-29-15	F. Zimmerman
NE. corner of Williams Ave. and Emerson St	2-24-15	John Clark
West side of Broadway, 80 ft. north of Hall St	3- 3-15	School District No. 1
554 Fourth St	10- 8-15	Mr. Seaquist
410 East Ash St	10- 8-15	J. O. Elrod
864 The Alameda	10- 8-15	C. J. Smith
NW. corner of 17th & Glisan Sts	10- 8-15	A. E. Klein
741 Alberta St	10- 8-15	Max Kaffesieder
Randolph St., bet. Loring St. and Railroad St	10-22-15	City of Portland Bureau of Water Works
109 Eleventh St	11- 3-15	S. Morton Cohn Real Estate & Inv. Co.
Oak St., bet. Park and West Park	11- 3-15	Jas. T. Barron
255 Thirteenth St	11- 3-15	Portland Social Turnverein
1415 Sandy Boulevard	11- 3-15	V. A. Crum
812 Corbett St	11- 3-15	Susie Widness
2049 E. 82nd St	11- 3-15	Frances E. Stanstrope
Corner 12th and Taylor Sts	11- 3-15	First M. E. Church
611 Lovejoy St	11-10-15	Portland Surgical Hospital
108 Second St	11-17-15	Labbe Bros.
121 Third St	11-17-15	Pelton Estate

GASOLINE FILLING STATIONS
UNDER THE PROVISIONS OF ORDINANCE NO. 29792

Location	Date	Granted to
54 Grand Avenue North	11-18-14	Sara Clunis
1050 Corbett St	11-18-14	D. M. Donaugh
89 Broadway, North	11-18-14	C. M. Senosky
44 Grand Ave., North	12-30-14	Emma S. Harty
SE. corner Broadway and E. Fourteenth St.	1-20-15	J. H. Dundore
507 Union Ave., North	1-20-15	M. N. Mayo
NW corner Fourteenth and Burnside Sts	2- 3-15	A. L. Sauvie
1628 E. 17th St	3-19-15	H. A. Vorpahl
892 Alberta St	4- 7-15	Mrs. B. L. Clark
863 Union Ave., North	4-23-15	Miller Wood Company
420 E. Clay St	5-26-15	Frank O. Ziegler
SE corner of E. Twelfth and E. Burnside Sts	5-26-15	Adolph A. Dekum
369 First St	5-26-15	Harry Nudelman
1114 Division St	5-26-15	M. H. Griffin
1571 Macadam St	5-26-15	Jos. Weber
707 Belmont St	6-23-15	B. F. Miller
1090 E. Yamhill St	7- 7-15	J. M. Wallace
374 Union Ave., North	8- 4-15	B. T. Soden
NE corner Albina Ave. and Portland Boulevard	8- 4-15	Chas. Oleson
758 Front St	8- 4-15	A. Abendroth
1623 Macadam St	8- 4-15	H. K. Haak
742 Lombard St	8- 4-15	H. Woodhouse
803 Mississippi Ave	8-11-15	J. F. Wilson
NW corner Sixth and Ankeny Sts.	8-18-15	P. H. Blythe
712 Williams Ave	9- 8-15	J. M. Pittenger
505 Alder St	9- 8-15	F. W. Leadbetter
460 Dekum Ave	9-15-15	W. S. Greene
353 N. Twenty-third St	9-29-15	Sol Rosenfeld Estate
Corner Broadway and Flint Sts.	10- 6-15	C. W. Miller
331 Ankeny St	10- 6-15	C. A. Malarkey & Sons
741 Alberta St	10-13-15	Max Koffesieder
488 Union Ave North	10-20-15	Alfred Hosbrouck
Oak St., bet. Park and W. Park	11- 3-15	Jas. T. Barron
109 Eleventh St	11- 3-15	S. Morton Cohn Real Estate & Inv. Co.
812 Corbett St	11-10-15	Susie Widness
1415 Sandy Boulevard	11-10-15	V. A. Crum
108 Second St	11-17-15	Labbe Bros.
1883 E. Glisan St	11-17-15	Jessie E. Baughman
72 Sixth St	11-17-15	Blythe & Russell

WAGON SCALE

Ordinance No. 9504. Wagon scale on Main street, in front of lot 1, block 7, Portland. Thos. Schneider.

Ordinance No. 16782. Wagon scale on East Washington street in front of lot 4, block 42, East Portland. Pearson-Page Co.

Ordinance No. 17111. Wagon scale on east side of East Sixth street, 30 feet south of Hawthorne avenue. Long and Kitching.

Ordinance No. 19893. Wagon scale—move from 312 Hoyt street to 310 Hoyt street. Oregon Transfer Co.

Ordinance No. 20145. Street scale in front of 128-130 Union avenue. Andrews & Son.

Ordinance No. 21722. Wagon scale in front of 55 Nesmith street, Albina. Edlefsen Fuel Co.

Ordinance No. 22364. Street scale in east side of Borthwick street, between Page and Russell streets. George and Shannon.

Ordinance No. 23544. Street scale on north side East Washington street, between East Second street and East Third street. G. W. Simpson.

Ordinance No. 23795. Street scale on west side of Front street, under Broadway bridge. Albers Bros. Milling Co.

Ordinance No. 24100. Street scale on west side of Union avenue, 80 feet south of East Mill street. Phoenix Iron Works.

Ordinance No. 25155. Wagon scale on south side of East Ash street, in front of lot 3, block 5, Frush's Square. Owner.

Ordinance No. 27591. Wagon scale in front of lot 5, block 192, East Portland. Star Sand Co.

Ordinance No. 27689. Wagon scale at 374 Front street. Ingham & Cogswell.

Ordinance No. 28016. Wagon scale in front of lot 5, block 15, East Portland. Edlefsen Fuel Co.

Ordinance No. 28654. Wagon scale at south side of East Alder street, between East First street and East Second street. Pearson Page Co.

Ordinance No. 28672. Track scale on west side of Macadam street between Lane street and Gaines street. Fisher, Thorsen & Co.

Ordinance No. 30631. Wagon scale on north side of Goldsmith street, between Delay street and Mississippi avenue. Star Sand Co.

STREET CLOCKS

Ordinance No. 9810. Clock, northwest corner of Third and Washington streets. Albert Feldenheimer.

Ordinance No. 13452. Clock on Third street in front of Mohawk building. Butterfield Bros.

Ordinance No. 19744. Clock in front of 268 Washington street. F. Friedlander.

Ordinance No. 19979. Clock at 149 Third street. I. Holsman.

Ordinance No. 20306. Clock at 548 Williams avenue. Hamilton Jewelry Co.

Ordinance No. 20463. Clock at 40 Third street. Holzman Bros.

Ordinance No. 21819. Clock at 283 Morrison street. Marx & Bloch.

Ordinance No. 22295. Clock at 324 Washington street. A. & M. Delovage.

Ordinance No. 23139. Clock at 1144 Albina avenue. Dillen Rogers.

Ordinance No. 23549. Remove clock from 286 Morrison street to 130 Fifth street. G. Heitkemper Co.

Ordinance No. 23787. Clock on north side of Washington street, near Sixth street. Holzman Bros.

Ordinance No. 24006. Clock in front of 225 First street. A. E. Hurwitz.

Ordinance No. 25011. Remove clock from 284 Washington street to 386 Washington street. L. C. Henrichsen Co.

rdinance No. 26575. Street clock at 162 First street. Isaac E. Staples.

Ordinance No. 27226. Street clock on south side of Washington street, 20 feet south of Broadway. I. Aronson.

Ordinance No. 27882. Move street clock from 403 East Morrison to 105 Grand avenue. A. E. Burke.

Ordinance No. 27923. Public clock at 121 Third street O. Korber.

Ordinance No. 28030. Street clock at 254 Alder. Lindquist & Nelson.

Ordinance No. 28115. Move street clock from 285 Washington street to corner of Washington and Park streets. A. & C. Feldenheimer.

Ordinance No. 28158. Street clock at 268 Washington street. Leffert Jewelry Co.

Ordinance No. 28656. Street clock at 373 East Burnside street. Rogers Bros.

Ordinance No. 30216. Clock at 141 A Broadway. Herman J. Altstock.

Ordinance No. 30255. Clock at 387 Alder street. H. I. Mendelsohn.

Ordinance No. 30386. Clock at 240 Alder street. Roy & Molin.

Ordinance No. 30812. Clock at 1651 E. Thirteenth street. Fallis & Matthews.

SIGNS—ILLUMINATED

Ordinance No. 15324. Illuminated sign at 109 Sixth street. Fred Fritz.

Ordinance No. 22050. Permission to move electric signs from Third and Yamhill streets to Eleventh and Morrison streets. George L. Baker.

Ordinance No. 22617. Electric sign at First and Washington streets. Apollo Roller Skating Rink Co.

Ordinance No. 23230. Electric sign across Burnside street, between Second and Third streets. Fritz & Russell.

Ordinance No. 24245. Electric sign across Alder street at West Park street. Peoples Amusement Co.

Ordinance No. 24499. Two electric signs across Third street and Fourth street. Philip Gevurtz.

Ordinance No. 25411. Electric sign across Alder street at First street. Portland Railway, Light & Power Co.

Ordinance No. 25653. Electric sign across Washington street, between Tenth and Eleventh streets. Globe Theatre Co.

Ordinance No. 26216. Electric sign on east side of Fifth street, south of Oak street. Kilham Stationery and Printing Co.

Ordinance No. 26494. Electric sign across Seventh street. Orpheum Theatre.

Ordinance No. 26675. Electric sign across Seventh street at Oak street. Wright-Dickinson Hotel Co.

Ordinance No. 26728. Electric sign across Sixth street, between Stark and Washington streets. Columbia Theatre Co.

Ordinance No. 26729. Electric sign across Seventh street and Park street. Empress Theatre.

Ordinance No. 26797. Remove electric sign from 111 Third street to southwest corner of Sixth and Washington streets. Brasfield & Porges.

Ordinance No. 29443. Electric sign across Washington street at Fourth street. Lyric Theatre Co.

SIGNS

Ordinance No. 22046. Metallic sign in front of 30-32 North Fifth street. The Rosenfeld-Smith Co.

Ordinance No. 24007. Signs marking Pacific Highway on certain streets. Pacific Highway Association.

Ordinance No. 26251. Signs on telephone poles. Library Association of Portland.

Ordinance No. 26827. Two post signs. Portland Fruit and Flower Mission.

Ordinance No. 30758. Electric sign at northwest corner of Broadway and Yamhill streets. Orpheum Theatre.

SIGN PERMITS

GRANTED UNDER PROVISIONS OF ORDINANCES 27662 AND 27933

Location	Date	Granted to
269 Crosby St.	12-18-13	Wurtenberger & Heinrich
200 Morrison St.	12-19-13	J. A. Clemenson Drug Co.
340 Morrison St.	12-19-13	The Wiley B Allen Co.
124 Russell St.	12-19-13	H. H. Heide
332 Washington St.	12-20-13	J. H. Leighton
61 N. 14th St	12-20-13	Howard Automobile Co.
740 Union Ave. N.	12-20-13	Henry Maier
132 Fourth St.	12-22-13	The Louvre
205 First St.	12-22-13	Lankin & Wildi.
56 N. Fourth St.	12-22-13	Tom K. Tanaka
4638 67th St. S. E.	12-22-13	A. Bonellis
268 Russell St.	12-22-13	Earl F. Hall
346½ Morrison St.	12-22-13	W. E. Songer
729 Williams Ave.	12-22-13	Sam and Bert West
164 Second St.	12-22-13	L. T. Outhier
263 First St.	12-22-13	Kamusher & Nudelman
523 Union Ave. N.	12-23-13	Donohue & Wagnitz
93½ Sixth St.	12-23-13	Chan Hi
212 Yamhill St.	12-23-13	Athos & Claude Ciattino
348 Morrison St.	12-23-13	W. H. Hamilton
124 Union Ave.	12-23-13	Accommodation Bag. & Tr. Co.
686½ Lombard St.	12-23-13	Peninsula Lodge, 128, I. O. O. F.
28½ N. Third St.	12-23-13	B. C. Larson
410 Stark St.	12-23-13	Schubert Bros.
210 Morrison St.	12-23-13	Gerspach & Stroup
652½ Alberta St.	12-23-13	Alberta Lodge 233, I. O. O. F.
167 Third St.	12-23-13	F. W. Winter
107½ Sixth St.	12-23-13	Hong Kong Cafe
107½ Sixth St.	12-23-13	Hong Kong Cafe
347½ Morrison St.	12-23-13	New Republic Grill
347½ Morrison St.	12-23-13	New Republic Grill
347½ Morrison St.	12-23-13	New Republic Grill
167 Broadway	12-23-13	Chambers & Son
567 Washington St.	12-24-13	Bert E. Allen
314 Second St.	12-24-13	Al Seguin
107½ Fourth St.	12-24-13	Ola J. Sharp
109 Broadway	12-24-13	Wyckoff & Butler
82½ Sixth St.	12-24-13	E. C. Ball
275 Third St.	12-24-13	Martin Denny
227 First St.	12-26-13	Joe Sigrist
106 Grand Ave.	12-26-13	Strowbridge Hdwe. & Pt. Co.
128 6th and 311 Alder St.	12-26-13	Hof Brau—Quelle
441 Washington St.	12-26-13	Julius P. Levy
1693 E. 13th St.	12-26-13	L. Charack
49 N. Third St.	12-26-13	Splidsboel & Nelson
311 Alder St.	12-26-13	Hof Brau—Quelle
108 Nelson St.	12-26-13	A. Brugger
233 Burnside St.	12-26-13	A. Clark
639 Washington St.	12-27-13	Geo. Moulton
126 Broadway	12-27-13	Western Union Tel. Co.
266½ Front St.	12-29-13	T. Sumida
326 Alder St.	12-29-13	Gemose & Ellis
247 Alder St.	12-29-13	Holden & Schlickeiser
68½ N. Sixth St.	12-30-13	H. B. Roberts (Jack. 10c Store)
287 Alder St.	12-30-13	Alder Hotel Co.
187 Fourth St.	12-30-13	Ham Bros.
292 Burnside St.	12-30-13	Wm. Schmidt
29 W. Fourth St.	12-30-13	M. Kawata
6¼ N. Third St.	12-30-13	Anton Canduyler
246½ Yamhill St.	1- 6-14	Hotel D'Moy
253½ Washington St.	1-12-14	American Sign Co.
400 Hawthorne Ave.	1-29-14	American Sign Co.
385 E. Morrison St.	1-29-14	American Sign Co.
72 and 74 Fifth St.	1-29-14	American Sign Co.
350 Morrison St.	2- 5-14	W. D. Fraley
174 Fourth St.	2-10-14	C. E. Obrist
210 First St.	2-13-14	Globe Liquor Co.

SIGN PERMITS—Continued

Location	Date	Granted to
127 Broadway	2-18-14	Postal Telegraph Co.
49 Third St	2-20-14	American Lens Sign Co.
293 Morrison St	2-21-14	American Sign Co.
128½ Broadway	2-24-14	American Sign Co.
283 Washington St	3-26-14	Portland Sign Co.
810 East Broadway	3-26-14	American Lens Sign Co.
Forty-second and Sandy Road	3-26-14	Portland Sign Co.
127 Eleventh St	3-26-14	Portland Sign Co.
Eleventh and Alder Sts	3-26-14	Portland Sign Co.
350 Alder St	4- 1-14	Hyatt Talking Machine Co.
348 Alder St	4- 8-14	Lang & Krause
191 Morrison St	4-14-14	American Lens Sign Co.
265 Morrison St	4-15-14	Boardman & Burgoal
107 Third St	4-20-14	Ry. Exchange Bldg.
48 N. Second St	4-21-14	Portland Sign Co.
Fourth and Morrison Sts		R. M. Gray
75 N. Third St	4-29-14	Portland Sign Co.
147 Third St	4-29-14	Portland Sign Co.
143 Broadway	5- 4-14	American Sign Co.
148 Park St	5- 4-14	Portland Sign Co.
146 Sixth St	5- 4-14	Columbia Optical Co.
161 Third St	4- 9-14	Brownsville Woolen Mills
231½ Morrison St	5-11-14	Meek Sign Co.
69 N. Tenth St	5-12-14	Wm. Schmidt
86 Tenth St	5-13-14	Portland Sign Co.
Tenth and Burnside Sts	5-14-14	Indian Grille
66¾ Sixth St	5-14-14	C. H. Green
Broadway and Everett Sts	5-16-14	Portland Sign Co.
1320 Sandy Blvd	5-16-14	American Lens Sign Co.
Sixth and Washington Sts	5-16-14	American Lens Sign Co.
113 N. Sixth St	5-18-14	Peter Lamkes

SIGN PERMITS—Continued

GRANTED UNDER PROVISIONS OF ORDINANCE 28959

Location	Date	Granted to
428 Washington St	5-25-14	Gately's Credit Clothing Co
108 Third St	6- 3-14	Nichol the Tailor
309 Burnside St	6- 3-14	Gus Petropolus
270 Burnside St	6- 3-14	Mike Dowgiallo
16 North Fourth St	6- 3-14	Mike Dowgiallo
124½ Fourth St	6- 9-14	Montgomery & Lumadue
West Park and Alder Sts	6-15-14	Woodard, Clarke & Co.
537 Union Ave	6-23-14	N. W. Hart
148 Broadway	7- 2-14	Weber Sign Co.
Foster Rd., bet. E. Main & Marion	7- 6-14	H. H. Spring
109 Eleventh St	7-31-14	Butterworth-St. Helen Co.
226 Pine St	8- 4-14	Weber Sign Co.
537 Union Ave	8-14-14	American Lens Sign Co.
144 Fourth St	8-14-14	American Lens Sign Co.
74 Third St	8-14-14	American Lens Sign Co.
92 N. Third St	8-14-14	American Lens Sign Co.
Fourth and Burnside Sts	8-24-14	American Lens Sign Co.
Second and Couch Sts	9-15-14	American Lens Sign Co.
Couch, bet. Second and Third	9-15-14	American Lens Sign Co.
322½ Williams Ave	9-15-14	Theodore Rieger
241 Couch St	9-16-14	Stasewich & Galash
Fourth, bet. Washington & Alder	9-17-14	M. H. McMahon
280 Morrison St	10-13-14	Portland Sign Co.
Sixth and Burnside Sts	10-13-14	Elephant Pharmacy
Broadway, bet. Stark and Wash	10-14-14	Orpheum Theatre
126 Broadway	10-15-14	Meek Sign Co.
117 Main St	10-15-14	Theckla Bright
Stark and West Park Sts	10-17-14	American Lens Sign Co.

SIGN PERMITS—Continued

Location	Date	Granted to
291½ Tenth St	10-26-14	Puritan Delicatessen
552 Union Ave	10-27-14	J. H. Fenton
Twelfth and Washington Sts	10-27-14	Nortonia Hotel Co.
West Park and Washington Sts	10-27-14	Bushnell's Studio.
151 Fourth St	11- 4-14	Portland Sign Co.
530 Mississippi Ave	11-12-14	Wray & Wray
246 Burnside St	11-14-14	American Lens Sign Co.
Sixth, bet Alder and Morrison Sts.	11-19-14	Portland Sign Co.
Second, bet. Burnside and Couch.	11-19-14	Portland Sign Co.
80 Third St	11-19-14	Portland Sign Co.
Park, bet. Stark and Washington	11-27-14	Portland Sign Co.
West Park, bet. Stark and Wash.	11-27-14	Portland Sign Co.
60th Ave., bet. 82nd & 10th Aves.	11-28-14	W. S. Bennett
349 Washington St	11-28-14	American Lens Sign Co.
126 Fourth St	11-28-14	American Lens Sign Co.

SIGN PERMITS—Continued

GRANTED UNDER PROVISIONS OF ORDINANCES NO. 28959 AND NO. 30332

Location	Date	Granted to
336 Broadway	12-3-14	Waldorf Barber Shop
101 Fourth St	12-10-14	Portland Sign Co.
165 Fourth St	12-28-14	Geo. L. Boynton
141 Broadway	1- 7-15	Weber Sign Co.
389 Washington St	1- 8-15	NePage & McKenney
381 Washington St	1- 8-15	NePage & McKenney.
331 Oak St	1- 9-15	Zancher Co.
62 Third St	1-18-15	Portland Sign Co.
245 Davis St	1- 18-15	Portland Sign Co.
62 Third St	1- 18-15	Portland Sign Co.
293 Grand Ave	1- 20-15	Main Electric Co.
147½ N. Sixth St	1- 21-15	Bang's Restaurant
245 Stark St	1- 28-15	Weber Sign Co.
185 Third St	2- 3-15	Main Electric Co.
409 Washington St	2- 3-15	Portland Sign Co.
1090 Belmont St	2- 8-15	Main Electric Co.
311 Washington St	2- 8-15	Portland Sign Co.
103 Sixth St	2-13-15	Gus Petroplus
204½ Washington St	2-13-15	Portland Sign Co.
243 Davis St	2-13-15	Portland Sign Co.
243 Davis St	2-13-15	Portland Sign Co.
367 Washington St	2-13-15	Portland Sign Co.
106 N. Main St. (Lents)	2-15-15	Benge & Bell
4515 Sixty-fifty St. S. E.	2-19-15	Arleta Bldg. Association
209 Morrison St	2-20-15	McDonald & Powell
64 Sixth St	2-24-15	Betty Olofson
SE corner Morrison and W. Park.	2-24-15	Central Drug Co.
Fourth, bet. Morrison and Alder.	2-25-15	Goodyear Shoe Co.
NW cor. Fifth and Washington	2-25-15	Henry Jenning & Sons.
5 N. Sixth St	2-25-15	I. B. Sturges
342 Alder St	3- 6-15	Main Electric Co.
130 Broadway	3- 8-15	Portland Sign Co.
140 Third St	3-15-15	Wonder Clothes Shop
West Park, bet. Washington and Alder Sts	3-24-15	Portland Sign Co.
NE cor. Fourth and Alder Sts	3-24-15	Portland Sign Co.
SE cor. Fourth and Stark Sts	3-24-15	Portland Sign Co.
324 Alder St	3-27-15	Multnomah Display
230 Washington St	3-27-15	Multnomah Display
134 Fourth St	4- 2-15	Weber Sign Co.
269 Washington St	4-12-15	Weber Sign Co.

SIGN PERMITS—Continued

Location	Date	Granted to
322 Washington St	4-12-15	Portland Sign Co.
110 N. Sixth St	4-13-15	Portland Sign Co.
362½ Alder St	4-15-15	Metropole Hotel
235 Morison St	4-19-15	Multnomah Display
275 Morrison St	4-19-15	Multnomah Display
249 Stark St	5-13-15	Weber Sign Co.
678 E. Broadway	5-13-15	The Sugar Bowl
327 Stark St	5-13-15	A. L. McDonald
413 Burnside St	5-26-15	Hotel Canadian
Washington St., bet. West Park and Tenth Sts	5-27-15	NePage & McKenney Co.
SE cor. Washington and Broadway	6- 4-15	M. A. Gunst & Co.
NE cor. Fifth and Morrison Sts	6- 4-15	M. A. Gunst & Co.
273 Grand Ave	6- 8-15	Main Electric Co.
SE cor. Sixth and Washington	7- 1-15	M. A. Gunst & Co.
SW cor. Third and Alder Sts	7- 1-15	M. A. Gunst & Co.
NW cor. Fourth and Washingon	7- 1-15	M. A. Gunst & Co.
360 Alder St	7- 8-15	Multnomah Display
103 Broadway	7-12-15	Portland Sign Co.
220 Morrison St	7-16-15	United Drug Store
185 First St	7-16-15	Gevurtz Furniture Co.
321 Washington St	7-23-15	Allen & Lewis
396 E. Clay St	7-24-15	N. F. Noren
206 Couch St	7-24-15	Henry Martyoff
216 Morrison St	7-31-15	C. E. Obrist
321 Washington St	7-31-15	Advance Sign Co.
Roof of Meier & Frank Bldg	8- 2-15	Portland Sign Co.
343 Washington St	8- 2-15	Portland Sign Co.
103 Broadway	8- 2-15	Portland Sign Co.
325 Alder St	8- 2-15	E. H. Holt.
266 Morrison St	8-13-15	Western Electric Works
322½ Stark St	8-18-15	Weber Sign Co.
165 First St	8-18-15	Weber Sign Co.
272 Washington St	9- 2-15	United Clothes Shop
328 E. Morrison St	9-13-15	Rose City Athletic Club
130 Third St	9-15-15	Portland Sign Co.
160 Fourth St	9-15-15	Portland Sign Co.
91 Sixth St	9-20-15	Advance Sign Co.
NE cor. Fourth and Washington	9-20-15	A. C. Hallam
SW cor. Third and Alder Sts	9-24-15	A. C. Hallam
SW cor. Sixth and Washington	9-29-15	Advance Sign Co.
N. side Alder, bet. Third and Fourth Sts	10- 1-15	Aug. Goetielman
369 and 371 E. Morrison Sts	10- 8-15	Casey House Furn. Co.
108 Broadway	10- 9-15	Portland Sign Co.
206 Broadway	10-14-15	Advance Sign Co.
1058 E. Twenty-fourth St. N	10-14-15	Beardsley & Thompson
82 Fifth St	11- 1-15	Advance Sign Co.
172½ Fourth St	11- 1-15	C. E. Obrist
65 N. Sixth St	11- 4-15	Standard Sign Co.
193 Broadway	11-10-15	W. C. Parrish
348 Morrison St	11-18-15	Andrew Kan Asiatic Imp. Co.
135 Fourth St	11-29-15	Advance Sign Co.

MISCELLANEOUS

Ordinance No. 14514. Wooden cornice on building constructed on lots 5, 6, 7 and 8, block 3, Frush's Square. Owner of building.

Ordinance No. 14960. Coal shed on lot 8, block "S," Couch's Addition. W. A. Storey.

Ordinance No. 15006. Brick sidewalk in front of lots 5 and 6, block 43, Stephens Addition. A. Van Hoomisen.

Ordinance No. 15673. Steam pipe underneath street at intersection of Third and Montgomery streets. Edw. and Julia Holman.

Ordinance No. 16873. Subway across Twelfth street, between blocks 81 and 82, Couch's Addition. Henry Weinhard Estate.

Ordinance No. 17667. Exterior decoration extended 8 inches on sidewalk at northeast corner of Fifth and Washington streets. Perkins Hotel Co.

Ordinance No. 17671. Wooden passageway to connect wooden buildings on lots 1, 2, 3 and 4, block 61, East Portland (in fire limits). Nottingham & Co.

Ordinance No. 17910. Cement steps and cement walk on Marshall street, from west line of Twenty-sixth street to easterly line of Cornell street. L. Goldsmith and E. L. Lowell.

Ordinance No. 19148. Underground conduit for electric light, steam heat and power for Lewis Building, Fourth and Oak streets, to Couch Building, 90 feet north of Washington street on Fourth street. Lewis Investment Co.

Ordinance No. 19268. Underground steam pipe from southeast corner of Fourth and Oak streets to southwest corner of Fourth and Oak streets. C. K. Henry.

Ordinance No. 19347. Bay window on wooden building at 363 Yamhill street. Mrs. P. W. Gillett.

Ordinance No. 19620. Two additional stories on Chamber of Commerce Building. Owners.

Ordinance No. 20858. Permission to change stable at northwest corner of Eleventh and Morrison streets to theater. Baker Theater Stock Co.

Ordinance No. 20991. Permission to construct wooden building on lot 2, block 8, East Portland. Atlas Mixed Mortar Co.

Ordinance No. 21613. Underground refrigerator pipe line from point 40 feet south of northeast corner block 89, Couch's Addition, to point 40 feet north of southeast corner of block 89. Swift & Co.

Ordinance No. 21621. Tunnel under Stark street, between Third and Fourth streets, for water and steam pipes. Railway Exchange Building Co.

Ordinance No. 22045. Stairway on Hall street at intersection of Heights Terrace. Jos. Jacobberger.

Ordinance No. 22254. Install heater under the sidewalk on Park street, 95 feet north of Washington street, to be used as heating plant for Star Theatre. Owner of lot 2, Park, block 1.

Ordinance No. 22436. Retaining wall and steps along First street and Lowell avenue in front of lots 1 and 2, block "B," First Street Terraces. J. B. Laber.

Ordinance No. 22543. Underground pipes and conduits for steam and hot water from lot 5, block 176, to lot 8, block 177, Portland. Imperial Hotel Co.

Ordinance No. 22856. Allowing Oregon Electric Railway Co. to

use wooden poles instead of iron poles until February 13, 1912. Oregon Electric Co.

Ordinance No. 22860. Allowing Spokane, Portland & Seattle Railway Co. to erect certain buildings in its terminal yards without conforming to City Ordinances. Not good after February 13, 1912. Spokane, Portland & Seattle Railway Co.

Ordinance No. 24012. Temporary wooden auditorium building on Kamm tract. G. F. Johnson.

Ordinance No. 24093. Underground pipes across Seventh street, between Washington and Stark streets. Brooke Estate.

Ordinance No. 24183. Wooden fence 8 feet high on north side of Pettygrove street and west side of Thirteenth street. Vulcan Coal Co.

Ordinance No. 24339. Exempting block 4, Railroad Shops Addition, from provisions of Ordinance No. 23716 relating to stables.

Ordinance No. 24422. Underground steam pipe across Oak street from Wells-Fargo Building to Benson Building. Owners, Benson Building.

Ordinance No. 24650. Permitting owners of lot 3, Park block 2, to connect with sewer in Washington street. L. G. Clarke and W. F. Woodward.

Ordinance No. 24887. Public watering trough in front of lot 8, block 5, Watson's Addition. Owner.

Ordinance No. 24904. Steam pipes across Yamhill street, near Seventh street. Journal Building Co.

Ordinance No. 26304. Uncovered driveway under Broadway bridge. Albers Bros. Milling Co.

Ordinance No. 26557. Steps twenty-eight inches over property line. Vernon Presbyterian Church.

Ordinance No. 26629. Garage in Elm street, west of Montgomery Street Drive. Mrs. John Brooke.

Ordinance No. 26630. Sidewalk elevator on east side of Twelfth street, 55 feet north of Washington street. H. W. Fries.

Ordinance No. 27093. Crane on west side of Thirteenth street, between Northrup and Overton streets. Portland Iron Works.

Ordinance No. 27210. Stretch wires across Broadway, between Yamhill and Taylor streets for wireless telegraphy purposes. Y. M. C. A.

Ordinance No. 27243. Steps six inches over property line at 845 Milwaukie street. Owner.

Ordinance No. 27299. Barber pole at 1267 Macadam street. A. Margulis.

Ordinance No. 27434. Underground conduit in Marshall street, between Twenty-Second street and Twenty-third street. Board of Hospital Trustees.

Ordinance No. 27617. Gas main on Grand avenue bridge. Portland Gas & Coke Co.

Ordinance No. 27655. Steam conduit across Park street, between Washington and Alder streets. Northwestern Electric Co.

Ordinance No. 27734. Attach span wires for support of trolley wires to Fire Department building on Fourth street, between Morrison and Yamhill streets. Portland, Eugene & Eastern Railway Co.

Ordinance No. 27998. Four lamp posts on Salmon street, between Park and West Park streets for Arlington Club. Portland Railway, Light & Power Co.

Ordinance No. 28501. String electric wires across Holgate street, near East Eighteenth street. Oregon & California Railroad Co.

Ordinance No. 28502. Flume across certain timber land owned by City of Portland in Sections 30 and 31, T. 1 S., R. 5 E. W. M. Walker Creek Lumber Co.

Ordinance No. 28635. Underground steam pipe from Perkins Hotel to Swetland Building. Perkins Hotel Co.

Ordinance No. 28642. Blasting, Westover Terraces. Lewis-Wiley Hydraulic Co.

Ordinance No. 28702. Enclose with board fence certain blocks and intervening streets in University Park. Marion Erceg.

Ordinance No. 28813. Temporary freight depot on block 86, East Portland. Spokane, Portland & Seattle Railway Co.

Ordinance No. 28840. Suspended pneumatic tubes across Fifth street, between Alder and Morrison streets. Meier & Frank Co.

Ordinance No. 28898. Ornamental arches and lights on Third street, between Yamhill and Glisan streets. Owners and Tenants.

Ordinance No. 29076. Exempting First M. E. Church at Twelfth and Taylor streets from provisions of Ordinance No. 21455 till July 1, 1916, under certain conditions.

Ordinance No. 29363. Overhead sawdust conveyer across foot of Spokane avenue. East Side Mill & Lumber Co.

Ordinance No. 29438. Exempting buildings at 311 and 311½ Burnside street from provisions of Ordinance No. 21455 until January 1, 1915. Andrew C. Smith.

Ordinance No. 29597. Bracket lights on Fourth street, from Jefferson street to Burnside street for five years. Owners and Tenants.

Ordinance No. 29757. Seven ornamental iron lamp posts in Georgian Court. F. W. Hild.

Ordinance No. 29758. Underground conduit across Oak street, between Broadway and Park street, for steam pipes and electric wires. Benson Hotel Co.

Ordinance No. 29850. Drill well on south side of Marshall street, 130 feet west of Twentieth street. Portland Electric Ice Co.

Ordinance No. 25570. Ellis bumping post on Fourth street, 20 feet north of Glisan street. Union Meat Co.

May 3, 1905. Dry kiln in East Twenty-eighth street, in Sullivan's Gulch. Doernbecher Mfg. Co.

Ordinance No. 30054. Street light standard in front of 127 Grand avenue. O. W. West.

Ordinance No. 30208. Erect bracket light on Pittock block. Northwestern Electric Co.

Ordinance No. 30655. Sawdust bin and loading platform in Occident street, between Oregon street and East Irving street, for a period of five years. F. C. Stettler.

Ordinance No. 30695. Two rubber covered wires for private telephone from Lewis Building to Board of Trade Building in underground circuit. Kerr-Gifford & Co.

Ordinance No. 30803. Wig-wag crossing bells at First and Front streets and Front and Lane streets. Oregon & California Railroad.

Ordinance No. 30819. Overhead blowpipe across north Front street. Emerson Hardwood Co.

Ordinance No. 31004. Electrolier on Davis street in front of lot 7, block 45, Couch's Addition. H. W. Wallace.

Ordinance No. 31080. Four-inch water column at East First street and East Ash street. Oregon and California Railroad Co.

ANNUAL REPORT OF A. L. BARBUR, SECRETARY OF THE FIREMEN'S RELIEF AND PENSION BOARD FOR YEAR ENDING NOVEMBER 30, 1915.

Balance, December 1st, 1914	.....	$13,507.00
Receipts:		
Taxes, 1915	$30,276.74	
Dues (1% of salary)	5,016.47	
Interest on daily balances	123.07	
Interest on Improvement Bonds	2,492.88	
Improvement Bonds cashed	500.00	
Proceeds of Police and Firemen's Band Souvenir	500.00	
Refund, P. Keegan	26.13	
Witness fees:		
L. N. Riley $2.10		
H. W. Strong 8.40		
W. J. Phillips 2.00		
Tom Gavin 2.00		
Sanderson Reed 2.00	16.50	
Donations:		
H. Weinhard estate $ 50.00		
H. E. & M. F. Failing and E. F. Cabell 50.00		
Wm. Young 5.00		
Lace House Laundry Co 2.50		
Frank C. Riggs 25.00		
Jones Cash Store 100.00		
M. L. Kline 250.00		
C. H. Bainbridge estate 2,000.00		
City of Troutdale 20.00		
Hugh C. Gearin 25.00	2,527.50	41,479.29
		$54,986.29
Disbursements:		
Claims paid account of accidents	$ 3,276.66	
Claims paid account of pensions	724.02	
Claims paid account of sickness	1,641.74	
Funeral expense, F. P. Klose	100.00	
Miscellaneous claims paid	55.50	
Purchase of Improvement Bonds	12,284.00	
Certificate of deposits	36,500.00	
Cash balance November 30, 1915	404.37	$54,986.29
Warrant account:		
Outstanding November 30, 1914	$ 11.65	
Drawn during year	22,070.27	$22,081.92
Paid during year	.....	$22,081.92
Investment Account:		
Imp. Bonds purchased and in custody of City Treasurer December 1, 1914	$29,798.09	
Imp. Bonds purchased during year	12,000.00	
Invested in certificate of deposit	36,500.00	$78,298.09
Imp. Bonds cashed during year	500.00	
Balance November 30, 1915	77,798.09	$78,298.09
Assets and Liabilities:		
Assets:		
Cash balance November 30, 1915	$ 404.37	
Investments	77,798.09	$78,202.46
Liabilities:		
Net balance November 30, 1915	.....	$78,202.46

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CITY OF PORTLAND
OREGON

MAYOR'S MESSAGE

AND

ANNUAL REPORTS

FOR THE FISCAL YEAR ENDING
NOVEMBER 30, 1916

CITY OF PORTLAND
OREGON

MAYOR'S MESSAGE

AND

ANNUAL REPORTS

FOR THE FISCAL YEAR ENDING
NOVEMBER 30, 1916

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Commission of Public Docks:

Report not included herein. Copies may be obtained from the Commission of Public Docks, Municipal Dock No. 1, Foot of Stark Street.

ELECTIVE OFFICERS

		Time expires
Commissioner of Public Safety	Mayor H. R. Albee	July 1, 1917
Commissioner of Public Utilities	Will H. Daly	July 1, 1917
Commissioner of Public Works	R. G. Dieck	July 1, 1917
Commissioner of Finance	C. A. Bigelow	July 1, 1919
Commissioner of Public Affairs	George L. Baker	July 1, 1919
Auditor	A. L. Barbur	July 1, 1919

Meetings of Council are held Wednesday of each week at 10 A. M.

CIVIL SERVICE BOARD

George W. Caldwell, Chairman.
John F. Logan
A. E. Clark

COMMISSION OF PUBLIC DOCKS

F. W. Mulkey, Chairman
C. B. Moores
Ben Selling
Dan Kellaher
John H. Burgard

MAYORS OF PORTLAND FROM 1851 TO 1916

Name.	Elected.
Hugh D. O'Bryant	April 7, 1851
A. C. Bonnell	April 5, 1852
Simon B. Marye	November 13, 1852
Josiah Failing	April 4, 1853
W. S. Ladd	March 15, 1854
George W. Vaughn	April 2, 1855
James O'Neill	April 7, 1856
James O'Neill	April 6, 1857
W. S. Ladd	November 4, 1857
A. M. Starr	April 5, 1858
S. J. McCormick	April 4, 1859
G. Collier Robbins	April 2, 1860
J. M. Breck	April 1, 1861
W. H. Farrar	April 7, 1862
David Logan	April 6, 1863
Henry Failing	April 4, 1864
Henry Failing	June 19, 1865
T. J. Holmes	November 26, 1866
T. J. Holmes	June 18, 1867
Aaron E. Wait	July 24, 1867
J. A. Chapman	July 31, 1867
Hamilton Boyd	June 16, 1868
B. Goldsmith	June 21, 1869
P. Wasserman	June 20, 1871
Henry Failing	June 16, 1873
J. A. Chapman	June 21, 1875
W. S. Newbury	June 18, 1877
D. P. Thompson	June 16, 1879
D. P. Thompson	June 20, 1881
J. A. Chapman	June 19, 1882
John Gates	June 15, 1885
Van B. DeLashmutt	May 2, 1888
Van B. DeLashmutt	June 18, 1888
W. S. Mason	June 15, 1891
George P. Frank	June 4, 1894
Sylvester Pennoyer	June 1, 1896
W. S. Mason	June 6, 1898
W. A. Storey	May 16, 1899
Henry S. Rowe	June 4, 1900
George H. Williams	June 2, 1902
Harry Lane	June 5, 1905
Harry Lane	June 3, 1907
Joseph Simon	June 7, 1909
A. G. Rushlight	June 5, 1911
H. R. Albee	June 2, 1913

ANNUAL REPORT

OF

THE DEPARTMENT OF PUBLIC SAFETY

FOR THE FISCAL YEAR ENDING
NOVEMBER 30, 1916

DEPARTMENT OF PUBLIC SAFETY

H. R. ALBEE
COMMISSIONER

BUREAU OF FIRE—
B. F. DOWELL, Chief
JAY W. STEVENS, Fire Marshal

BUREAU OF POLICE—
JOHN CLARK, Chief

BUREAU OF HEALTH—
JOHN G. ABELE, M. D., Health Officer

MUNICIPAL COURT—
ARTHUR LANGGUTH, Judge

POUND BUREAU—
BOYD R. WELCH, Poundmaster

HARBOR PATROL—
JACOB SPEIER, Harbormaster

BOARD OF MOTION PICTURE CENSORS—
MRS. E. B. COLWELL, Secretary

BUREAU OF FIRE.

Hon. H. R. Albee, Mayor and Commissioners:

I respectfully submit the following report of the operations and expenditures of the Bureau of Fire for the year ending November 30, 1916, with suggestions and recommendations as I deem necessary or pertinent at this time, with other matters appertaining thereto of public interest.

The appropriation for the year as per attached financial statement was $627,492.94 and the expenditures $599,598.16. New equipment added during the year consisted of one American La France type 3, 4-cylinder 75 horse power front drive Tractor, one American La France type 10 combination Chemical Engine and Hose Motor Car, and one 5-passenger Buick touring car.

There was also purchased 2200 feet of 2½-inch and 600 feet of 1½-inch Keystone Hose, and 400 feet of 1-inch Chemical Hose.

Repairs on the apparatus have been kept up as conditions required, and the repairs to houses have rendered them in good condition, with the exception of Engine and Truck Company No. 1 and Engine Companies 5, 6 and 20, which stations are badly in need of new houses, and I earnestly recommend that some action be taken looking towards the erection of new buildings for the above mentioned Companies.

Repeating my recommendations of a year ago, I again call your attention to the advisibility of eliminating horse drawn apparatus, and replacing same with auto equipment, as this seems to be the course pursued in all up-to-date cities.

You will be particularly gratified and interested in the report of Fire Marshal Jay Stevens attached hereto, whose operations along the line of Fire Prevention have astonished the country, and whose methods are being studied and copied in many cities.

The report of Fire Marshal Stevens speaks volumes, and proves what can be accomplished under the guidance of a master mind with an able corps of assistants.

I have made every effort to keep the expenses of the bureau at as low a figure as possible, consistent, however, with first class service, and due regard for the safety of lives and property. The hearty co-operation I have received at your hands as well as from your colleagues and my able assistants has had much to do with any success I have achieved in directing the affairs of the Bureau.

Respectfully submitted,

B. F. DOWELL, Chief Engineer.

OFFICERS BUREAU OF FIRE

B. F. DOWELL, Chief Engineer.

M. LAUDENKLOS, First Assistant Chief Engineer.
(Fourth District, East Side, North of East Ankeny Street.)

JAY W. STEVENS, Second Assistant Chief Engineer and Fire Marshal.
(Third District, East Side, South of East Ankeny Street.)

LEE G. HOLDEN, Battalion Chief.
(First District, West Side, South of Morrison Street.)

JOHN E. YOUNG, Battalion Chief.
(Second District, West Side, North of Morrison Street.)

CHARLES A. SAVARIAU, Superintendent Fire Alarm Telegraph.

W. J. PHILLIPS, Master Mechanic.

ORGANIZATION OF BUREAU OF FIRE FOR YEAR ENDING NOVEMBER 30, 1916.

Chief Engineer	1	Machinist	1
Assistant Chief Engineers	2	Instrument Maker	1
Battalion Chiefs	2	Blacksmith	1
Chief Clerk	1	Plumber	1
Clerks	2	Supply Driver	1
Stenographer	1	Fire Boat Masters	2
Auto Mechanician	1	Fire Boat Pilots	2
Fire Escape Inspector	1	Fire Boat Engineers	6
Relief Engineers	2	Captains	36
Superintendent of Fire Alarm Telegraph	1	Lieutenants	44
		Second Lieutenants	40
Chief Operator	1	Steamer Engineers	19
Operators	6	Assistant Engineers, Truckmen, Hosemen and Pipemen	235
Linemen	4		
Master Mechanic	1		
Hydrantmen	2	Total	417

STATEMENT SHOWING CONDITION OF APPROPRIATIONS AND EXPENDITURES FOR THE FISCAL YEAR ENDING NOVEMBER 30, 1916:

	Total Appropriations Including Transfers	Total Encumbrance	Unencumbered Balance
Personal Service	$ 526,180.00	$ 512,455.22	$ 13,724.78
Supplies	36,750.00	35,355.11	1,394.89
Material	7,727.94	7,711.65	16.29
Equipment	21,495.00	19,262.22	2,232.78
Construction and Extension	250.00		250.00
Repairs	19,249.76	15,937.84	3,311.92
Light, Heat and Power	60.00	60.00	
Janitorial Service	480.00	439.80	40.20
Trans. and Communication	4,526.00	4,321.39	204.61
Contingencies	2,393.24	1,930.93	462.31
Fixed Contributions	3,081.00	1,524.00	1,557.00
Real Estate	5,300.00	600.00	4,700.00
	$ 627,492.94	$ 599,598.16	$ 27,894.78

EXPENSE DISTRIBUTION, 1916

ENGINE COMPANIES AND FIRE BOATS	Personal Service A1	Office Supplies B1	Heating Fuel B2	Fuel Oil B2	Feed B3	Cleaning Supplies B5	Auto Supplies B6
Fire Boat No. 1	$26.499 70	$ .52	.....	$4088.56	.....	$ 87.81	$ 10.69
Fire Boat No. 2	25,600.15	.10	$ 111.00	1405.18	.....	87.95	11.30
Engine Co. No. 1	13,065.35	.05	315.71	.....	.....	41.89	181.02
Engine Co. No. 2	14,056.35	.47	137.96	.....	652.68	67.30	.....
Engine Co. No. 3	14,875.25	.47	157.15	.....	547.64	47.67	.....
Engine Co. No. 4	11,243.80	.....	233.15	.....	636.46	31.05	.....
Engine Co. No. 5	12,012.45	.42	239.47	.....	537.14	48.43	.....
Engine Co. No. 6	10,817.20	.42	255.08	.....	610.84	33.91	.....
Engine Co. No. 7	11,853.75	.05	206.65	.....	691.79	37.90	.....
Engine Co. No. 8	12,396.85	.52	302.50	.....	688.55	39.74	.....
Engine Co. No. 9	11,880.95	.....	187.00	.....	.....	45.53	19.54
Engine Co. No. 10	11,201.10	.05	261.77	.....	653.62	31.20	.....
Engine Co. No. 11	12,254.40	.05	199.65	.....	521.37	46.46	.....
Engine Co. No. 12	12,120.15	.42	187.50	.....	539.56	47.30*	.....
Engine Co. No. 13	12,844.30	.....	165.00	.....	.....	32.72	45.33
Engine Co. No. 14	12,406.65	.71	300.69	.....	497.08	22.82	.....
Engine Co. No. 15	9,918.00	.....	123.75	.....	.....	18.78	317.67
Engine Co. No. 16	12,406.25	.10	201.23	.....	529.32	51.16	.....
Engine Co. No. 17	10,516.45	.47	353.11	.....	.....	50.74	246.11
Engine Co. No. 18	8,264.05	.42	197.50	.....	.....	33.72	31.05
Engine Co. No. 19	10,456.35	.47	403.50	.....	622.27	58.38	.....
Engine Co. No. 20	10,893.40	.42	337.07	.....	733.99	55.06	.....
Engine Co. No. 21	8,413.75	.47	.....	.....	.....	24.76	26.39
Engine Co. No. 22	10,140.55	.42	154.80	.....	.....	29.60	19.68
Engine Co. No. 23	10,055.65	.....	304.66	.....	.....	21.62	297.14
Engine Co. No. 24	11,999.45	.42	393.18	.....	643.15	44.64	.....
Engine Co. No. 25	8,520.60	.05	147.50	.....	570.25	48.98	.....
Engine Co. No. 26	8,754.20	.05	143.00	.....	516.51	24.83	19.22
Engine Co. No. 27	8,263.00	.47	376.50	.....	392.13	35.02	.....
Engine Co. No. 28	8,633.75	.....	237.50	.....	252.15	22.84	.....
Engine Co. No. 29	8,869.50	.....	171.00	.....	234.11	17.24	.....
Engine Co. No. 30	8,837.90	.....	195.00	.....	282.15	32.90	.....
Engine Co. No. 31	8,696.95	.42	177.25	.....	274.96	21.35	.....
Engine Co. No. 32	8,033.15	.47	107.80	.....	.....	19.45	6.73
Engine Co. No. 33	8,539.40	.47	76.90	.....	242.98	23.07	.....
Truck 1	13,142.75	.57	54.30	.....	.....	42.06	20.06
Truck 2	11,422.40	.52	45.91	.....	79.12	26.47	41.30
Truck 3	12,580.25	.47	418.09	.....	126.96	35.83	28.21
Truck 4	11,168.30	.42	.....	.....	.....	41.26	32.42
Truck 5	10,703.05	.05	423.84	.....	.....	25.60	.....
Chemical 1	3,971.70	.....	.....	.....	.....	17.59	10.55
Res. Eng. and App	.....	.....	.....	.....	.....	.....	.....
Woodstock	.....	.....	.....	.....	.....	.....	.....
Supply House	.....	.....	72.00	.....	.....	2.80	.....
Midway	.....	.....	.....	.....	.....	.....	.....
Gray's Crossing	.....	.....	.....	.....	.....	.....	.....
Office and Staff	22,573.35	277.79	.....	.....	.....	.....	.....
Fire Alarm Telegraph	16,666.32	19.05	.....	.....	.....	4.44	.....
Fire Marshal's	4,877.35	810.71	.....	.....	.....	.....	563.08
Hydrants, St. Johns	.....	.....	.....	.....	.....	.....	.....
Hydrants and Cisterns	.....	.....	.....	.....	.....	1.87	.....
Chief Dowell's car	.....	.....	.....	.....	.....	.....	238.93
Chief Laudenklos' car	.....	.....	.....	.....	.....	.....	173.50
Chief Stevens' car	.....	.....	.....	.....	.....	.....	335.63
Chief Holden's car	.....	.....	.....	.....	.....	.....	273.10
Chief Young's car	.....	.....	.....	.....	.....	.....	208.30
F. A. Tel. auto	.....	.....	.....	.....	.....	.....	124.37
F. A. T. truck	.....	.....	.....	.....	.....	.....	182.25
Supply truck	.....	.....	.....	.....	.....	.....	446.94
Store Account	.....	.....	.....	.....	.....	.....	1,634.28
Credits	.....	.....	.....	.....	.....	.....	*1,534.83
	512,455.22	1118.95	7951.83	5493.74	12,500.62	1581.74	4009.96

*Credit.

EXPENSE DISTRIBUTION, 1916—Continued

ENGINE COMPANIES AND FIRE BOATS	Agri. Supplies B7	General Plant B10	Coal Oil B10	Bldg. Material C3	General Plant Material C4	Office Equipment D1	Furniture Removal D2
Fire Boat No. 1		$ 213.93	$ 13.70	$ 20.82	$ 144.25		
Fire Boat No. 2		127.39	16.75	233.32	113.51		
Engine Co. No. 1		63.81	17.20	29.58			$ 12.00
Engine Co. No. 2		66.49	9.45	33.27	4.48		.40
Engine Co. No. 3		40.58	12.90	548.20	20.52		
Engine Co. No. 4		28.16	9.45	251.16	3.20		
Engine Co. No. 5		37.57	8.60	195.21	9.07		13.00
Engine Co. No. 6		18.14	10.30	64.91	4.63		
Engine Co. No. 7		31.10	8.60	515.47	2.28		
Engine Co. No. 8		38.93	7.75	93.89	2.40		49.32
Engine Co. No. 9		26.67	8.60	15.28			
Engine Co. No. 10		30.80	8.60	26.38			1.40
Engine Co. No. 11		37.27	9.05	45.77	1.72		11.50
Engine Co. No. 12		36.25	12.45	117.01	1.58		17.30
Engine Co. No. 13		19.80	6.85	176.80			85.00
Engine Co. No. 14		28.16	8.60	48.02	2.15		
Engine Co. No. 15		20.63	2.15	51.84			1.12
Engine Co. No. 16	1.95	38.24	8.60	64.69	1.98		1.21
Engine Co. No. 17		29.63	8.60	133.87			
Engine Co. No. 18		19.57	8.60	15.73			
Engine Co. No. 19		47.96	11.15	46.43			
Engine Co. No. 20		35.69	9.90	39.62			11.25
Engine Co. No. 21		22.02	2.60	6.32			
Engine Co. No. 22		57.87	3.90	127.93	1.00		
Engine Co. No. 23		18.36	6.90	87.25			
Engine Co. No. 24		29.66	8.15	228.56			
Engine Co. No. 25		31.47	8.60	102.76			55.80
Engine Co. No. 26		21.12	7.75	30.01			10.80
Engine Co. No. 27		30.54	6.45	46.08	3.17		
Engine Co. No. 28	2.75	8.30	3.05	21.26			
Engine Co. No. 29		21.40	5.15	21.48			
Engine Co. No. 30		58.76	4.70	3.20			
Engine Co. No. 31		14.78	8.60	27.13			
Engine Co. No. 32		7.62	6.85	225.56			7.90
Engine Co. No. 33		13.94	5.15	8.99			24.75
Truck 1		63.08	9.85	14.30			17.32
Truck 2		11.81	9.05	37.33			
Truck 3		42.71	7.30	19.02			
Truck 4		24.04	8.60	1.79			13.34
Truck 5		6.73	7.30	.05	.21		
Chemical 1		75.42					
Res. Eng. and App							
Woodstock							
Supply House		6.88		35.16			
Midway				8.92			
Gray's Crossing							
Office and Staff		276.82		2.07		99.00	
Fire Alarm Tel		415.56			3,129.65	12.50	
Fire Marshal's		51.27		.25		205.43	
Hydrants, St. Johns							
Hydrants and Cisterns		8.84		438.50	3.30		
Chief Dowell's car							
Chief Laudenklos' car							
Chief Stevens' car							
Chief Holden's car							
Chief Young's car							
F. A. T. auto							
F. A. T. truck							
Supply truck					1.36		
Store Account							
Credits							
	$ 4.70	2355.77	337.80	4261.19	3450.46	316.93	333.41

EXPENSE DISTRIBUTION, 1916—Continued

ENGINE CO'S. AND FIRE BOATS	Live-Stock Equip. D3	Motoriess Vehicle Equip. D4	Auto Equip-Ment. D5	Auto Acces-sories D5	Tools D7	Miscel. Equip-ment D8	Small Stores D8
Fire Boat No. 1				$10.66	$ .68	$350.37	
Fire Boat No. 2				16.66	3.37	458.37	
Engine Co. No. 1				36.50	3.05		$ 77.70
Engine Co. No. 2		$ 1.25			17.25		9.34
Engine Co. No. 3				12.00	1.75		48.19
Engine Co. No. 4		2.25					27.06
Engine Co. No. 5					.23		19.53
Engine Co. No. 6		2.00					3.75
Engine Co. No. 7		5.50			3.79		2.20
Engine Co. No. 8		15.23			.51		18.10
Engine Co. No. 9				14.24	1.05		.85
Engine Co. No. 10		.91			.62		4.03
Engine Co. No. 11		16.95					40.87
Engine Co. No. 12		4.14			12.80		12.71
Engine Co. No. 13				6.34			19.39
Engine Co. No. 14		1.20			1.51		86.25
Engine Co. No. 15				20.94	1.00		94.04
Engine Co. No. 16		5.75			3.19		43.45
Engine Co. No. 17				17.68	1.48		7.25
Engine Co. No. 18				6.34			1.00
Engine Co. No. 19		11.02			.60		35.10
Engine Co. No. 20							8.47
Engine Co. No. 21				11.67			42.05
Engine Co. No. 22				34.47			28.95
Engine Co. No. 23				.50	2.81		
Engine Co. No. 24					1.92		10.20
Engine Co. No. 25		1.00			10.74		25.44
Engine Co. No. 26				6.34	.62		92.27
Engine Co. No. 27		2.25			2.34		7.00
Engine Co. No. 28					.20		9.45
Engine Co. No. 29		1.50			1.69		17.50
Engine Co. No. 30		5.39			.62		11.25
Engine Co. No. 31		12.00			.95		10.77
Engine Co. No. 32				5.33			146.04
Engine Co. No. 33		10.75					13.43
Truck 1				19.41	4.63		1.75
Truck 2		10.10		5.33			10.81
Truck 3				5.60	2.73		38.07
Truck 4				11.94			26.50
Truck 5		1.22					
Chemical 1				5.75	1.75		.45
Res. Eng. and App							
Woodstock							22.56
Supply House							2.35
Midway							11.39
Gray's Crossing							
Office and Staff	250 00		10,582.00		4.30	3673.22	
Fire Alarm Tel					60.88	1401.45	
Fire Marshal's				3.75	1.96	152.76	
Hydrants, St. Johns							
Hyd. and Cisterns					3.51		.47
Chief Dowell's car				22.10			
Chief Laudenklos'car				6.00			
Chief Stevens' car				7.00			
Chief Holden's car				13.00			
Chief Young's car				15.98			
F. A. T. auto				.73			
F. A. T. truck				26.66			
Supply truck				36.47	3.10		
Store Account							
Credits							
	$ 250.00	118.41	10,582.00	379.39	157.63	6036.17	1088.28

EXPENSE DISTRIBUTION, 1916—Continued

ENGINE CO'S. AND FIRE BOATS	House Repairs E2	Apparatus Repairs E2	Harness Repairs E2	Auto Repairs E3	Repairs E2	Light, Heat, Power E4	Janitorial Service E5
Fire Boat No. 1	$ 32.27	$ 430.50		$ 316.86			
Fire Boat No. 2	1.31	521.59		315.72			
Engine Co. No. 1	24.36	25.78		366.16			
Engine Co. No. 2	5.95	18.76	14.15				19.30
Engine Co. No. 3	58.59	44.62	4.15	1197.19			16.82
Engine Co. No. 4	15.96	134.67	4.55				16.82
Engine Co. No. 5	96.99	252.30	4.85				16.82
Engine Co. No. 6	55.23	75.47	18.13				16.82
Engine Co. No. 7	340.75	45.11	15.47				16.82
Engine Co. No. 8	25.11	42.37	12.40				16.82
Engine Co. No. 9	1.62			194.03			
Engine Co. No. 10	30.62	331.42	4.00				16.82
Engine Co. No. 11	9.13	182.59	8.63				16.82
Engine Co. No. 12	10.29	11.68	2.30				16.82
Engine Co. No. 13	11.31	3.79		430.47			
Engine Co. No. 14	1.41	8.49	10.80				16.82
Engine Co. No. 15				109.17			
Engine Co. No. 16	137.10	12.49	8.50				16.82
Engine Co. No. 17	131.80	52.89		398.45			
Engine Co. No. 18	15.02			40.24			
Engine Co. No. 19	20.55	458.55	22.35				16.82
Engine Co. No. 20	1.48	268.71	1.75				16.82
Engine Co. No. 21		2.29		164.59			
Engine Co. No. 22	58.51	7.74		35.42			
Engine Co. No. 23	7.54	.96		102.18			
Engine Co. No. 24	28.52	299.48	6.65				16.82
Engine Co. No. 25	27.10	197.60					16.82
Engine Co. No. 26	3.50	6.58	3.40	12.21			16.82
Engine Co. No. 27	56.04	9.96	5.75				16.82
Engine Co. No. 28	179.62		2.25				16.82
Engine Co. No. 29	3.47						16.82
Engine Co. No. 30	72.62	5.81	2.90				16.82
Engine Co. No. 31	42.42	16.13	.50				16.82
Engine Co. No. 32	5.88	2.54					
Engine Co. No. 33	12.53		10.00				16.82
Truck 1		186.51		207.54			
Truck 2	160.98	23.56		75.60			16.82
Truck 3	32.51	1.40	1.25	605.26			16.82
Truck 4	4.16			17.99			
Truck 5	7.36	31.18	1.00				16.82
Chemical 1		238.32		137.21			
Res Eng. and App		49.56					
Woodstock							
Supply House							
Midway							
Gray's Crossing							
Office and Staff							
Fire Alarm Tel					511.15	60.00	
Fire Marshal's				171.09			
Hydrants, St. Johns							
Hyd. and Cisterns					2298.41		
Chief Dowell's car				375.09			
Chief Laudenklos car				71.22			
Chief Stevens' car				313.84			
Chief Holden's car				366.78			
Chief Young's car				219.49			
F. A. T. auto				309.93			
F. A. T. truck				256.21			
Supply truck				321.60			
Store Account							
Credits							
	$ 1729.61	$ 4001.40	$ 165.73	$7231.54	$2809.56	$ 60.00	$ 439.80

EXPENSE DISTRIBUTION, 1916—Continued

ENGINE CO.'S AND FIRE BOATS	Hire of Horses E6a	Shoeing of Horses E6d	Veterinary Services E6d	Boarding Horses E6d	Car Fare E6e	Tel. and Tel. Services E7a	Street Assessments
Fire Boat No. 1							
Fire Boat No. 2							
Engine Co. No. 1							
Engine Co. No. 2		232.61	30.00				
Engine Co. No. 3		186.28	27.60			2.80	
Engine Co. No. 4		215.94	27.60				
Engine Co. No. 5		211.13	27.60				
Engine Co. No. 6		184.43	27.60				
Engine Co. No. 7		180.01	27.60				
Engine Co. No. 8		208.70	27.60				
Engine Co. No. 9							
Engine Co. No. 10		177.05	27.60				
Engine Co. No. 11		119.66	27.60				
Engine Co. No. 12		136.35	27.60				
Engine No. Co. 13							
Engine Co. No. 14		164.56	27.60				
Engine Co. No. 15							
Engine Co. No. 16		161.96	27.60				
Engine Co. No. 17							
Engine Co. No. 18							
Engine Co. No. 19		176.87	27.60				
Engine Co. No. 20		179.53	27.60				
Engine Co. No. 21							
Engine Co. No. 22							
Engine Co. No. 23							
Engine Co. No. 24		184.17	27.60				
Engine Co. No. 25	21.00	54.98	27.60				
Engine Co. No. 26		9.70	27.60				
Engine Co. No. 27		47.42	27.60				
Engine Co. No. 28		86.95	27.60				
Engine Co. No. 29		61.72	27.60				
Engine Co. No. 30		78.49	27.60				
Engine Co. No. 31	21.00	35.72	27.60				
Engine Co. No. 32							
Engine Co. No. 33		79.42	27.60				
Truck 1							
Truck 2		20.51	27.60				
Truck 3		41.85	27.60				
Truck 4							
Truck 5		133.90	27.60				
Chemical 1							
Res. Eng. and App.							
Woodstock							
Supply House							
Midway							
Gray's Crossing							
Office and Staff				21.50		64.50	192.24
Fire Alarm Tel							
Fire Marshal's					4.50	96.18	
Hydrants, St. Johns							
Hyd. and Cisterns							
Chief Dowell's car							
Chief Laudenklos car							
Chief Stevens' car							
Chief Holden's car							
Chief Young's car							
F. A. T. auto							
F. A. T. truck							
Supply truck							
Store Account							
Credits							
	$ 42.00	$3369.91	$ 720.00	$ 21.50	$ 4.50	$ 163.48	$ 192.24

EXPENSE DISTRIBUTION, 1916—Continued

ENGINE CO.'S AND FIRE BOATS	Contingencies F	Rent G2	All. to Vol. Hose Cos. Fixed Charges	Real Estate H	Repairs to Property Damaged by Apparatus	Other Fixed Charges G7	Total
Fire Boat No. 1							32,221.32
Fire Boat No. 2	1.96	120.00					29,145.63
Engine Co. No. 1							14,360.16
Engine Co. No. 2							15,387.46
Engine Co. No. 3							17,850.37
Engine Co. No. 4							12,881.28
Engine Co. No. 5							13,730.81
Engine Co. No. 6		180.00					12,378.86
Engine Co. No. 7							13,984.84
Engine Co. No. 8							13,987.29
Engine Co. No. 9							12,395.36
Engine Co. No. 10							12,815.99
Engine Co. No. 11							13,549.49
Engine Co. No. 12							13,314.21
Engine Co. No. 13							13,847.10
Engine Co. No. 14							13,633.52
Engine Co. No. 15							10,679.09
Engine Co. No. 16							13,721.59
Engine Co. No. 17							11,948.53
Engine Co. No. 18							8,633.24
Engine Co. No. 19							12,315.97
Engine Co. No. 20							12,621.06
Engine Co. No. 21							8,716.91
Engine Co. No. 22							10,700.84
Engine Co. No. 23							10,904.57
Engine Co. No. 24							13,922.57
Engine Co. No. 25							9,868.29
Engine Co. No. 26							9,706.53
Engine Co. No. 27							9,328.54
Engine Co. No. 28							9,504.49
Engine Co. No. 29							9,470.18
Engine Co. No. 30							9,636.11
Engine Co. No. 31							9,405.35
Engine Co. No. 32							8,575.32
Engine Co. No. 33							9,106.20
Truck 1							13,784.13
Truck 2							12,025.22
Truck 3							14,031.93
Truck 4							11,350.76
Truck 5							11,385.91
Chemical 1							4,458.74
Res. Eng. and App							49.56
Woodstock							22.56
Supply House							119.19
Midway							20.31
Gray's Crossing	10.71						10.71
Office and Staff	*207.83		1335.00	600.00	326.21		40,485.83
Fire Alarm Tel							22,281.00
Fire Marshal's	466.71				12.50		7,417.54
Hydrants, St. Johns	712.77						712.77
Hyd. and Cisterns						784.00	3,538.90
Chief Dowell's car							636.12
Chief Laudenklos car							250.72
Chief Stevens' car							656.47
Chief Holden's car							652.88
Chief Young's car							443.77
F. A. T. auto							435.03
F. A. T. truck							465.12
Supply truck							809.47
Store Account							1,634.28
Credits		*895.00					*2,429.83
	$1399.98	$*595.00	1335.00	600.00	338.71	784.00	599,598.16

*Credit.

EQUIPMENT, NOVEMBER 30, 1916

	Pieces.
Fire Boats	2
Auto Apparatus	29
Horse-Drawn Apparatus	41
Horse-Drawn Apparatus in Reserve	7
Horses	92
Hose, feet	95,850
Hydrants	4,999
Cisterns	81
Alarm Boxes	338

Eight Auxiliary Fire Companies with 7 reels, 2 village trucks, 1 40-gallon chemical and 8,250 feet of hose.

AUTOMOBILES AND AUTO APPARATUS IN THE BUREAU OF FIRE, NOVEMBER 30, 1916

Make	Description	Number	Date of Purchase	Price
Pierce-Arrow	6-Cyl. 4-Passenger Roadster	30038	Feb., 1909	$ 3,500
Cadillac	4-Cyl. 5-Passenger Tour. Car	2916	May, 1911	2,000
Overland	4-Cyl. 4-Passenger Tour. Car	611889	July, 1912	2,119
Mitchell	6-Cyl. 2-Passenger Roadster	23445	April, 1912	2,065
Pope-Hartford	4-Cyl. 2-Passenger Roadster	2591	Aug., 1912	*3,000
Velie	Runabout	30208	July, 1913	1,575
White	Three-ton Truck	20786	Oct., 1914	4,600
Federal	One-ton Truck	921	April, 1913	1,965
American-LaFrance	Comb. Hose and Chem. Engine	13	June, 1911	5,380
American-LaFrance	Comb. Hose and Chem. Engine	14	June, 1911	5,380
American-LaFrance	Type 10 Comb. Hose & Chem. Eng.	269	June, 1913	
American-LaFrance	Type 10 Comb. Hose and Chem. Eng.	261	June, 1913	
American-LaFrance	Type 10 Comb. Hose and Chem. Eng.	265	June, 1913	
American-LaFrance	Type 10 Comb. Hose and Chem. Eng.	267	June, 1913	52,264
American-LaFrance	Type 10 Comb. Hose and Chem. Eng.	264	June, 1913	
American-LaFrance	Type 10 Comb. Hose and Chem Eng.	268	June, 1913	
American-LaFrance	Type 12 Pumper	271	June, 1913	
American-LaFrance	85-foot Aerial Truck	270	June, 1913	
Pope-Hartford	Type M Comb. Hose and Chem. Eng.	100	April. 1913	6,000
Pope-Hartford	Type M Comb. Hose and Chem. Eng.	101	April, 1913	6,000
Velie	Two-ton Truck	2084	Dec., 1913	3,000
American-LaFrance	Type 12 Pumper	409	Nov. 21, 1913	9,000
White	1½-ton Chassis	20529	Feb., 1915	3,000
Christie	Tractor		March, 1914	5,656
White	Auto Chemical Engine	23990 GTF	June, 1915	5,900
Seagrave	6-Cyl. Motor City Service Hook and Ladder Truck		August, 1915	6,468
Selden	Combination Hose and Chemical	23290	May, 1914	2,860
American-LaFrance	85-foot Aerial Truck No. 151	956	Dec. 27, 1915	11,950
American-LaFrance	Two-Wheel Front Drive Tractor	869	Dec. 6, 1915	4,350
Buick	5-Passenger Touring Car Frame No. 235694	225947	Nov,. 1916	785

*Salvage.

BUREAU OF FIRE AUTO APPARATUS—EXPENSE DISTRIBUTION FOR 1916

	Gasoline	Grease	Oil	Soap	Supplies	Tires	Accessories	Repairs	Total	Mileage
Chief B. F. Dowell's auto	$ 81.42	$ 1.80	$ 5.80	$ .30	$ 18.18	$ 131.43	$ 22.10	$ 375.09	$ 636.12	6,447
Asst. Chief M. Laudenklos' auto	53.33	2.70	5.95	.60	7.05	103.87	6.00	71.22	250.72	4,046
Second Asst. Chief J. W. Stevens' auto	78.85	.75	35.39		7.05	213.59	7.00	313.84	656.47	4,316
Battalion Chief L. G. Holden's auto	83.10	3.75	21.45	.36	29.87	134.57	13.00	366.78	652.88	6,244
Battalion Chief John Young's auto	35.66	.75	10.70	.48	5.10	155.61	15.98	219.49	443.77	3,820
Fire Alarm Telegraph	48.29	.75	6.53		4.35	64.45	.73	309.93	435.03	3,829
Fire Alarm Telegraph truck	113.59	.75	13.05		2.88	51.98	26.66	256.21	465.12	6,704
Supply truck	153.27	3.75	25.75		18.69	245.48	36.47	321.60	805.01	13,761
Arson Squad	306.81	3.83	32.03	.36	.62	219.43	3.75	171.09	737.92	50,526
Fire Boat "David Campbell	9.19	1.50					10.66	316.86	338.21	178
Fire Boat "Geo. H. Williams"	5.62	2.25	1.90	.33	1.20		16.66	315.72	343.68	89
Engine Co. No. 1 Tractor	11.66		2.00		1.62	132.37	36.50	389.15	573.30	170
Engine Co. No. 1 Combination	11.96	.90	7.80	.21	12.50			77.01	110.38	163
Engine Co. No. 3							12.00	1197.19	1,209.19	
Engine Co. No. 9	13.89		3.80		1.85		14.24	194.03	227.81	295
Engine Co. No. 13 Pumper	20.06	1.95	8.75					204.10	234.86	202
Engine Co. No. 13 Combination	6.45		1.95	.77	5.40		6.34	226.37	247.28	175
Engine Co. No. 15	9.39	.75	3.85		20.81	282.87	20.94	109.17	447.78	212
Engine Co. No. 17 Pumper	18.96	1.95	12.70	.21			12.68	171.82	218.32	268
Engine Co. No. 17 Combination	12.62	3.15	9.09	.24	3.84	183.35	5.00	226.63	443.92	256
Engine Co. No. 18	7.55	2.03	1.90	.57	19.00		6.34	40.24	77.63	183
Engine Co. No. 21	14.67		5.80	.18	5.74		11.67	164.59	202.65	169
Engine Co. No. 22	12.00		2.00		5.68		34.47	35.42	89.57	326
Engine Co. No. 23	5.97	.45	3.85		4.00	282.87	.50	102.18	399.82	128
Engine Co. No. 26	7.19	3.00	3.85		5.18		6.34	12.21	37.77	193
Engine Co. No. 32	3.84	.45	2.00		.44		5.33		12.06	123
Truck Co. 1	12.38	.60	1.90		5.18		19.41	207.54	247.01	182
Truck Co. 2	29.12	1.88	9.64		.66		5.33	75.60	122.23	446
Truck Co. 3	16.36	4.05	6.90	.24	.66		5.60	605.26	639.07	312
Truck Co. 4	22.91	1.65	3.85		4.01		11.94	17.99	62.35	437
Chemical 1	10.55						5.75	137.21	153.51	141
Totals	$ 1,216.66	$ 45.39	$ 250.18	$ 4.85	$ 191.56	$ 2,201.87	$ 379.39	$ 7,231.54	$ 11,521.44	$ 104,341
Inventory, Dec. 1st, 1915	$ 39.38	$ 26.50	$ 34.50	$ 24.78						
Purchased during 1916	1,229.68	54.15	321.58							
Used during 1916	1,215.88	45.39	250.96	4.85						
Inventory Dec. 1, 1916	54.43	34.43	108.50	19.89						

HOSE ON HAND

Company	3½″	2¾″	2½″	1½″	1″ Chem.	¾″ Chem.
	Feet	Feet	Feet	Feet	Feet	Feet
Fire Boat "David Campbell"	1,900	6,150	.....	400	300	.....
Fire Boat "Geo. H. Williams"	1,800	2,300	.....	550	200	.....
Engine Co. 1	.....	.....	2,000	285	.....	250
Engine Co. 2	.....	.....	1,700	300	.....	.....
Engine Co. 3	.....	1,915	.....	300	.....	.....
Engine Co. 4	.....	.....	1,980	300	.....	.....
Engine Co. 5	.....	.....	2,000	250	.....	.....
Engine Co. 6	.....	.....	2,000	200	.....	.....
Engine Co. 7	.....	.....	3,250	300	.....	.....
Engine Co. 8	.....	.....	1,850	300	.....	.....
Engine Co. 9	.....	.....	1,900	200	.....	250
Engine Co. 10	.....	.....	2,000	300	.....	.....
Engine Co. 11	.....	.....	2,000	300	.....	.....
Engine Co. 12	.....	.....	2,000	300	.....	.....
Engine Co. 13	.....	.....	1,650	300	.....	200
Engine Co. 14	.....	.....	1,850	200	200	.....
Engine Co. 15	.....	.....	1,850	300	.....	250
Engine Co. 16	.....	.....	2,000	200	.....	.....
Engine Co. 17	.....	.....	1,962	300	.....	250
Engine Co. 18	.....	.....	2,000	200	250	.....
Engine Co. 19	.....	.....	1,850	.....	150	.....
Engine Co. 20	.....	.....	2,068	300	.....	.....
Engine Co. 21	.....	.....	1,825	300	.....	250
Engine Co. 22	.....	.....	1,750	250	.....	250
Engine Co. 23	.....	.....	2,000	300	.....	250
Engine Co. 24	.....	.....	1,550	200	200	.....
Engine Co. 25	.....	.....	1,900	300	.....	.....
Engine Co. 26	.....	.....	1,985	300	.....	250
Engine Co. 27	.....	.....	2,000	200	.....	230
Engine Co. 28	.....	.....	2,000	200	.....	200
Engine Co. 29	.....	.....	2,000	300	.....	.....
Engine Co. 30	.....	.....	2,000	300	.....	.....
Engine Co. 31	.....	.....	2,000	450	.....	.....
Engine Co. 32	.....	.....	2,900	150	.....	200
Engine Co. 33	.....	.....	2,000	200	.....	.....
Truck Co. 1	.....	.....	.....	.....	.....	.....
Truck Co. 2	.....	.....	.....	.....	.....	.....
Truck Co. 3	.....	.....	.....	350	.....	250
Truck Co. 4	.....	.....	.....	200	300	.....
Truck Co. 5	.....	.....	.....	.....	.....	.....
Chem. 1	.....	.....	.....	.....	400	.....
Total	3,700	10,365	63,820	10,085	2,000	3,080

AUXILIARY VOLUNTEER HOSE COMPANIES

	2½″	1½″	1″ Chem.
Linnton Volunteer Hose Co	1,250	1,300	100
Woodstock Volunteer Hose Co	500	.....	.....
Tremont Volunteer Hose Co	800	.....	.....
Arbor Lodge Volunteer Hose Co	1,000	.....	.....
Midway Volunteer Hose Co	1,000	.....	.....
Portsmouth Volunteer Hose Co	1,000	.....	.....
Lents Volunteer Hose Co	600	.....	.....
Gray's Crossing Volunteer Hose Co	600	.....	.....
Total	6,850	1,300	100

VALUATION OF REAL ESTATE, IMPROVEMENTS AND APPARATUS AT VARIOUS FIRE STATIONS

	Real Estate	Improvements	Apparatus
Fire Boat "David Campbell"	$ 12,000.00	$ 12,000.00	$ 128,000.00
Fire Boat "Geo. H. Williams"	Lease	500.00	78,917.91
Engine Co. 1 and Truck 1	87,000.00	7,000.00	28,675.00
Engine Co. 2	15,000.00	14,000.00	7,700.00
Engine Co. 3	26,000.00	2,000.00	5,900.00
Engine Co. 4 and Truck 2	6,150.00	15,000.00	18,050.00
Engine Co. 5	1,600.00	1,500.00	5,150.00
Engine Co. 6	Lease	1,000.00	5,400.00
Engine Co. 7 and Truck 4	6,000.00	8,000.00	11,868.00
Engine Co. 8 and Truck 5	4,400.00	15,000.00	5,650.00
Engine Co. 9	2,600.00	15,000.00	4,500.00
Engine Co. 10	600.00	3,000.00	4,850.00
Engine Co. 11	700.00	3,000.00	5,150.00
Engine Co. 12	1,400.00	3,000.00	5,150.00
Engine Co. 13	3,500.00	7,200.00	13,000.00
Engine Co. 14	1,700.00	1,000.00	5,250.00
Engine Co. 15	2,200.00	7,000.00	5,800.00
Engine Co. 16	8,500.00	15,000.00	5,150.00
Engine Co. 17	5,200.00	12,000.00	14,000.00
Engine Co. 18	3,000.00	7,000.00	5,800.00
Engine Co. 19	1,700.00	9,000.00	5,250.00
Engine Co. 20	3,100.00	800.00	5,150.00
Engine Co. 21 and Chem. 1	13,100.00	16,000.00	11,700.00
Engine Co. 22	10,500.00	15,000.00	5,800.00
Engine Co. 23	950.00	7,000.00	5,800.00
Engine Co. 24	7,000.00	15,000.00	5,250.00
Engine Co. 25	1,200.00	16,000.00	900.00
Engine Co. 26	4,200.00	2,400.00	5,800.00
Engine Co. 27	650.00	8,400.00	1,000.00
Engine Co. 28	1,600.00	8,000.00	1,000.00
Engine Co. 29	Lease	8,000.00	900.00
Engine Co. 30	900.00	8,000.00	900.00
Engine Co. 31	800.00	2,880.00	900.00
Engine Co. 32	8,000.00	20,000.00	3,000.00
Engine Co. 33	2,400.00	800.00	600.00
Truck Co. 3	10,500.00	12,500.00	7,350.00
Supply Truck	2,500.00	1,800.00	3,700.00
Fire Alarm Truck			1,200.00
In reserve			9,200.00
Officer's Automobiles			6,900.00
Total	$ 256,650.00	$ 300,780.00	$ 446,260.91

LOCATIONS OF HOUSES OCCUPIED AS FIRE STATIONS

Fire Boat No. 1, "David Campbell"	Foot of East Washington Street
Fire Boat No. 2, "Geo. H. Williams"	Foot of Hoyt Street
Engine Co. No. 1	168-170 Fourth Street
Engine Co. No. 2	126 North Third Street
Engine Co. No. 3	510 Washington Street
Engine Co. No. 4	370 Fourth Street
Engine Co. No. 5	811 Front Street
Engine Co. No. 6	Twenty-second and Nicolai Streets
Engine Co. No. 7	40 East Third Street
Engine Co. No. 8	303 Russell Street
Engine Co. No. 9	162 East Thirty-fifth Street
Engine Co. No. 10	1250 Macadam Street
Engine Co. No. 11	545 Powell Street
Engine Co. No. 12	63 East Twenty-eighth Street North
Engine Co. No. 13	261 Grand Avenue North
Engine Co. No. 14	1027 Union Avenue North
Engine Co. No. 15	590 Spring Street
Engine Co. No. 16	494 Montgomery Street
Engine Co. No. 17	188 North Twenty-fourth Street
Engine Co. No. 18	448 East Twenty-fourth Street North
Engine Co. No. 19	1597 East Stark Street
Engine Co. No. 20	1660 East Thirteenth Street
Engine Co. No. 21	69 Second Street
Engine Co. No. 22	273 First Street
Engine Co. No. 23	367 East Seventh Street
Engine Co. No. 24	1126 Patton Avenue
Engine Co. No. 25	1000 Francis Avenue
Engine Co. No. 26	329 North Twentieth Street
Engine Co. No. 27	30 East Eighty-second Street North
Engine Co. No. 28	1494 Sandy Boulevard
Engine Co. No. 29	426 Durham Avenue
Engine Co. No. 30	1711 Brandon Street
Engine Co. No. 31	4536 Sixty-seventh Street Southeast
Engine Co. No. 32	St. Johns
Engine Co. No. 33	859 Mississippi Avenue
Truck 1	168-170 Fourth Street
Truck 2	370 Fourth Street
Truck 3	511 Glisan Street
Truck 4	40 East Third Street
Truck 5	303 Russell Street
Chemical 1	69 Second Street
Supply House	227 Union Avenue North

LOCATIONS OF VOLUNTEER HOSE COMPANIES

Portsmouth	Stanford, between Portsmouth and Bowdoin Streets
Midway	1189 Milwaukie Street
Lents	Fifty-eighth Ave. and Ninety-third St., Odd Fellows Bldg.
Tremont	Fifty-ninth and Seventy-second Street
Linnton	First and D Streets
Woodstock	4228 Sixtieth Avenue, S. W. Corner Forty-third Avenue
Arbor Lodge	287 West Portland Blvd., N. W. Corner Greely and Blvd
Gray's Crossing	Eighty-second and Woodstock Avenue.

REPORT OF SUPERINTENDENT OF FIRE ALARM AND TELEGRAPH FOR FISCAL YEAR ENDING NOV, 30, 1916

Chief B. F. Dowell, City Hall, Portland, Oregon.

Dear Sir: The report on the operation, maintenance, and new installation of equipment of the Fire Alarm Telegraph for the year ending November 30, 1916, is herewith submitted.

As to the operation, all equipment worked very satisfactorily.

Considerable work was done on the maintenance of the system, many repairs and betterments were made on overhead lines, trees trimmed and new pieces of wire were placed that had become defective through contact with limbs and leaves of trees.

Several months were occupied in permanently repairing and strengthening corners, and re-routing circuits after the Silver Thaw in February. This storm very forcibly illustrates the value of underground construction, as none of our Fire Alarm box, or House circuits in the underground, congested value districts were interrupted in service, while the overhead lines, particularly on the east side, many of the circuits were down.

On new construction work the following boxes were installed:

No. 199—Council Crest Drive and Chehalem Avenue.
No. 482—East Sixty-ninth street and Powell Valley Road.
No. 517—East Eighty-second street and Tillamook street.

Also about eight miles of overhead wire has been put up in North Albina on the extension of our lines to St. Johns, this circuit will cover a large territory heretofore without Fire Alarm service.

At the beginning of this year work was started on the manufacture of fifty Fire Alarm boxes at our municipal shop and upon the completion of this lot, I would recommend that funds be appropriated for a certain lot of boxes to be made each year, as this City is sadly in need of this service owing to the large district covered.

Respectfully submitted,

CHAS. A. SAVARIAU,
Superintendent Fire Alarm and Telegraph.

REPORT OF FIRE MARSHALL FOR FISCAL YEARS 1915 AND 1916

Hon. H. R. Albee, Commissioner of Public Safety.

Dear Sir: In submitting my report for the fiscal years of 1915 and 1916, I wish to call particular attention to the marked reduction in the property loss, number of alarms, number of false alarms, and number of alarms in which a loss occurred. This can best be shown by comparing the records for those years with the totals for the year preceeding the beginning of fire prevention work.

Fire loss, 1914	$1,762,493.46
Fire loss, 1915	1,289.372.76
Fire loss, 1916	554,205.63
No. of alarms, 1914	1854
No. of alarms, 1915	1225
No. of alarms, 1916	816
No. of false alarms, 1914	187
No. of false alarms, 1915	28

No. of false alarms, 1916	13
No. of fires entailing losses, 1914	505
No. of fires entailing losses, 1915	481
No. of fires entailing losses, 1916	393

The larger part of the totals for the year 1915 is due to fires that occurred previous to the inauguration of the fire prevention work.

During the year 1914 there were only eight days on which no alarms were received, during 1915 there were thirty-four, and 1916, sixty-one.

In the year 1916 there was a period, June 25, at 10:22 P. M., until July 3, at 12:20 P. M., or 182 hours, 18 minutes, or over 7¼ days, during which no alarms of fire were responded to.

During the year 1916 there were 36 persons indicted for arson, of which 20 were convicted.

This remarkable showing is the result of a great amount of earnest effort on the part of the members of the Fire Prevention Bureau, with the co-operation and support of the Mayor, Fire Chiefs, District Attorney's Office and Public Safety Commission, to all of whom we are greatly indebted.

The movement for fire prevention was taken up first by Mr. Arthur M. Churchill, of the Civic League, together with Mr. Walter S. Creech, of the Fire Bureau Office Staff, with the co-operation of Mr. E. M. Underwood of the Portland Credit Men's Association. The enormous losses of life and property by fires during 1913 and 1914, and a proposed increase in fire insurance rates made it imperative that the Bureau of Fire do more than fight fires after they originated. These men saw the need of fighting the fire by preventing it, so the movement for fire prevention was begun.

The results of the strenuous efforts of all the above-mentioned persons, as shown in the accompanying tables, proves conclusively that fire prevention does pay and leads me to believe that if this movement is earnestly continued under proper supervision there is no reason why the fire losses cannot be further greatly reduced.

There were 65,490 buildings inspected during 1915 and 86,327 during 1916, or a total of 151,817 for the two years; in addition to this nearly 500 frame buildings were removed.

Recommendation: There is great need at the present time for an ordinance governing the sale, use and storage of gasoline and other volatile oils, as the present ordinance having been passed several years ago is now inadequate to govern the greatly increased use of these liquids.

A drastic ordinance covering the use, storage and transportation of explosives is greatly needed.

Respectfully submitted,

JAY W. STEVENS.

TABLE SHOWING FIRE LOSSES, INSURANCE, ETC., FOR FISCAL YEAR 1915

Description of Building Material Built of			MONTH	Val. involved in Fires		Loss		Loss in Which Fire Did Originate	
Brick or Stone	Frame	Others than Bldg. Fire		Building	Contents	Building	Contents	Building	Contents
21	207	28	December, 1914	$ 798,625.00	$ 639,651.62	$ 28,810.61	$ 33,423.96	$ 28,503.77	$ 33,423.96
17	114	15	January, 1915	518,975.00	1,235,315.00	13,677.13	19,228.24	13,238.37	19,228.24
13	77	8	February, 1915	1,253,716.00	328,251.32	55,164.52	95,959.67	54,910.52	94,955.97
12	111	15	March, 1915	329,255.00	390,495.20	33,075.30	195,074.94	31,995.30	192,587.02
14	70	18	April, 1915	840,190.48	857,262.15	57,539.35	218,336.88	41,778.30	180,338.46
12	52	11	May, 1915	240,610.00	196,208.20	13,488.76	27,706.56	12,965.37	27,256.06
13	40	8	June, 1915	349,400.00	145,230.00	44,336.34	110,399.49	38,340.80	92,315.49
8	37	7	July, 1915	158,000.00	183,200.00	9,346.36	3,857.59	9,316 36	3,563.27
15	56	25	August, 1915	446,925.00	385,957.76	80,954.07	196,784.67	76,061.44	194,410.51
9	45	21	September, 1915	500,400.00	1,280,507.02	10,777.73	9,113.07	10,502.73	8,563.07
9	44	8	October, 1915	118,400.00	64,454.40	9,379.10	6,137.42	9,233.60	6,112.42
12	45	8	November, 1915	161,300.00	41,346.00	7,450.64	9,350.36	7,400.64	9,300.36
155	898	172	Totals	$5,715,796.48	$5,747,878.67	$ 363,999.91	$ 925,372.85	$ 334,247.20	862,054.83

MONTH	Loss in Which Fire Did Not Originate		Insured For		Insurance Paid		Confined to Building in Which It Started	Extended to Adjoining Building	Extended Beyond Adjoining Building
	Building	Contents	Building	Contents	Building	Contents			
December, 1914	$ 306.84	.....	$ 516,200.00	$ 534,000.00	$ 25,865.88	$ 26,974.96	225	3	.....
January, 1915	438.76	.....	398,694.00	936,665.00	12,427.13	12,318.24	129	2	.....
February, 1915	254.00	1,003.70	781,550.00	241,350.00	54,438.22	92,674.67	88	2	.....
March, 1915	1,030.00	2,487.92	208,200.00	312,900.00	31,409.23	150,208.52	120	3	.....
April, 1915	15,761.05	37,998.42	750,550.00	754,550.00	56,779.07	215,954.48	83	1	.....
May, 1915	523.39	450.50	187,200.00	58,050.00	11,378.76	11,706.36	62	2	.....
June, 1915	5,995.54	18,084.00	214,350.00	119,600.00	33,621.84	102,056.49	50	1	2
July, 1915	30.00	294.32	121,100.00	159,800.00	8,731.36	2,787.59	43	1	1
August, 1915	4,892.63	2,374.16	307,250.00	267,055.00	58,510.07	180,491.45	63	4	4
September, 1915	275.00	550.00	342,250.00	1,232,700.00	9,398.18	7,688.07	52	1	1
October, 1915	145.50	25.00	76,250.00	50,200.00	9,129.10	4,059.70	50	3	.....
November, 1915	50.00	50.00	100,500.00	24,750.00	6,445.49	8,341.36	55	2	.....
Totals	$ 29,752.71	$ 63,318.02	$4,004,094.00	$4,691,620.00	$ 318,134.33	$ 815,361.89	1020	25	8

TABLE OF ALARMS FOR FISCAL YEAR 1915

Month	No. of Alarms	No. Alarms Entailing Loss	No. of False Alarms	No. of Days No Alarms	Alarms Outside City Limits
December, 1914	256	64	9	0	1
January, 1915	146	52	6	1	1
February	98	37	3	0	2
March	138	55	1	0	2
April	102	47	3	5	0
May	75	33	2	3	0
June	61	24	0	8	2
July	52	30	0	6	0
August	96	48	0	0	1
September	75	33	0	2	1
October	61	27	2	6	1
November	65	31	2	3	1
Total	1,225	481	28	34	12

CAUSES OF FIRE BY MONTHS FOR THE FISCAL YEAR ENDING NOVEMBER 30, 1915

	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	July	Aug.	Sep.	Oct.	Nov.	Total
Accident										1		1	2
Auto exhaust							1						1
Back fire, auto		2	1	1			1		1				6
Back draught				1		1	1		1				4
Bonfire	4	1	1	1				1	1	2			11
Burglars				1									1
Burning brush	3		1	4	1			1	4	1			15
Burning flue	123	51	36	49	19	15	9	4	5	6	10	11	338
Burning grass	3			2		1			6	10	1		23
Burning grease	1	1								2		2	6
Burning sawdust				1									1
Careless smoking	1	1											2
Chemical explosion					1	1							2
Candles		1	1								1	1	4
Cigars	1		2		1		3	2	4	4	2		19
Cigarettes		2		1	4	4	4		6	2			23
Coal oil stoves		1	1	1		1	1						5
Coal oil explosion	2	1		2	1		1				1	2	10
Defective flue	9	7	3	5	6	2	2	2	1		2		39
Defective fireplace	2	2											4
Defective furnace		1											1
Defective gas pipe			1	1									2
Defective stove	1	1					1						3
Defective stove pipe	1		2	1	1								5
Defective wiring	3	3	3	4	3	1				2	1	1	21
Defective oil burner			1	1								2	4
Electric wires		1		1		1			2	1		1	7
Electric iron	1	1	1	1			2					1	7
Electric curling iron										1			1
Electric solder'g iron					1								1
Escaping steam	3	1				1				1			6
False alarm	9	6	3	1	3	2					2	2	28
Fireworks								1					1
Friction			1					1					2
Fumigating		1			1	1		2		1	1		7
Gas explosion			1	2								1	4
Gas stove	2	1	1	1	1	2							8
Gas plate				1					3			2	6
Gas jet			1		1	1	1			1		1	6
Gasoline	4	4	1	1	3	1		6	3	3	5	5	36
Gasoline stove										1			1
Hot ashes	8	2	1	1	2	1	1	1		1			18
Hot sand									1				1
Illumination			1									1	2
Incendiary				1	3	2	3	2	5	4	2	1	23
Lamp explosion						1		1				1	3
Leaking gas				1	1	1				1		2	6
Leaking gasoline				1	3			1	1			2	8
Lightning				1									1
Matches	5	2	3	1	5	2	2	3	4	3		1	31
Matches, children	1			1	2	1	1	4	3	3	4	1	21
Mistaken alarms				1									1
Overheated furnace	6	5	3	1	2	1					1		19
Overheated flue	2		1	1							1		5
Overheat. wash boiler										1			1
Overheated stove	3	12	7	3	5	3	2	1	6	1	3	4	50
Overheat. stovepipe	2	1	1	1		1	1			1	3		11
Overheated kiln					1								1
Overheated motor										1			1
Overheated oven		1								1			2
Overheated smoke-house				1									1
Overturned lamp	1	1	1	1		1		1					6
Overturned lantern	1											1	2
Overturned stove	1	1											2
Pitch pot	1				1				1	2	1		6
Phosphorus	1												1

CAUSES OF FIRE BY MONTHS FOR THE FISCAL YEAR ENDING NOVEMBER 30, 1915—Continued

	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Total
Rubbish	3	2	.....	.....	.....	.....	1	.....	1	1	1	.....	9
Short circuit, auto	.....	.....	.....	.....	.....	.....	2	1	.....	.....	2	.....	5
Short circuit, st. car	.....	.....	.....	.....	1	1	.....	2	2	.....	.....	.....	6
Smoke	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	2
Smoking furnace	2	.....	.....	1	2	.....	2	1	2	.....	.....	.....	10
Smoking motorcycle	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	2
Smoking stove	.....	2	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	3
Smoking oil stove	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1
Smoking in bed	1	2	.....	.....	.....	.....	.....	.....	2	1	.....	.....	6
Sparks	.....	3	.....	.....	.....	.....	2	.....	2	1	1	3	12
Sparks from stove	.....	.....	1	.....	1	1	.....	.....	.....	1	1	.....	5
Sparks from furnace	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	1	3
Sparks from chimney	13	5	.....	13	14	4	5	7	8	2	2	1	74
Sparks from fireplace	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1	2
Stove, clothing near	.....	1	.....	.....	.....	1	.....	.....	.....	.....	1	2	5
Stove, wood near	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1
Stovepipe, articles near	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
Supposed incendiary	7	7	4	7	4	4	2	3	3	4	3	.....	48
Spontaneous comb	2	5	3	6	2	4	2	1	6	2	2	2	37
Smoldering ruins	2	.....	.....	2	.....	1	1	.....	.....	.....	.....	.....	6
Torch	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	2
Unknown	19	3	9	7	5	10	4	3	11	5	5	7	88
Outside city	1	1	2	2	.....	.....	2	.....	1	1	1	1	12
Total	256	146	98	138	102	75	61	52	96	75	61	65	1,225

TABLE SHOWING FIRE LOSSES, INSURANCE, ETC., FOR FISCAL YEAR 1916

Description of Building Material Built of			MONTHS	Alarms Received								Injuries		Loss of Life		Value Involved in Fires	
Brick or Stone	Frame	Others than Bld-fire		Bell	Tel	Still	Total	En-tail'g Loss	False	Out-side City	Days None Rec'd	Fire-men	Oth-ers	Fire. men	Oth-ers	Building	Contents
10	69	5	Dec., 1915.....	37	42	5	84	31	2	1	2	1	0	0	0	$ 239,062.39	$ 381,599.81
8	83	6	Jan., 1916.....	21	74	2	97	47	0	1	3	1	0	0	0	343,450.00	443,575.00
16	55	6	Feb., 1916.....	18	51	8	77	36	0	0	2	2	0	0	0	236,140.65	296,241.29
9	29	2	March, 1916....	20	18	2	40	26	0	0	10	1	1	0	1	783,125.00	353,060.00
11	35	3	April, 1916.....	15	32	2	49	34	2	0	7	0	0	0	1	500,100.00	85,623.50
3	52	4	May, 1916.....	19	36	4	59	31	1	1	3	0	0	0	1	201,755.00	63,674.50
13	38	7	June, 1916.....	17	37	4	58	31	0	1	6	0	0	0	0	767,125.00	59,420.00
12	39	4	July, 1916.....	16	35	4	55	27	0	2	10	0	2	0	1	341,300.00	53,400.00
15	40	7	Aug., 1916.....	25	32	5	62	31	0	1	6	0	1	0	1	434,525.00	312,742.00
10	33	14	Sept., 1916.....	20	28	9	57	22	3	3	5	1	3	0	0	115,650.00	60,700.00
7	58	29	Oct., 1916.....	28	52	14	94	35	2	3	1	2	2	0	1	163,215.00	34,415.00
7	65	12	Nov., 1916.....	35	45	4	84	42	3	1	6	2	7	0	1	165,825.00	76,775.00
121	596	99	Grand Totals.....	271	482	63	816	393	13	14	61	10	16	0	7	$4,291,273.04	$2,221,276.10

TABLE SHOWING FIRE LOSSES, INSURANCE, ETC., FOR FISCAL YEAR 1916—Continued

Months	Loss		Loss in Which Fire Did Originate		Loss in Which Fire Did Not Originate		Insured For		Insurance Paid		Confined to Bldg in which it Started	Extended to Adjoining Building	Extended Beyond Adjoining Bldg.
	Building	Contents	Building	Contents	Building	Contents	Building	Contents	Building	Contents			
Dec., '15.....	$ 23,845.09	$ 61,967.58	$ 21,494.30	$ 61,057.58	$ 2,350.79	$ 910.00	$ 192,357.39	$ 242,445.69	$ 21,495.09	$ 50,231.58	77	1	1
Jan., '16.....	28,744.21	117,525.07	28,433.93	117,299.07	310.28	226.00	209,550.00	342,600.00	28,119.21	117,273.07	88	3	0
Feb., '16.....	31,667.02	80,219.20	31,366 59	80,166.35	300.43	52.85	147,341.95	252,472.00	31,222.02	75,266.22	70	1	0
Mar., '16.....	10,317.05	14,925.91	9,917.55	14,890.91	399.50	35.00	324,888.00	199,960.00	10,267.05	14,367.91	36	2	0
April, '16.....	8,859.63	9,533.41	8,818.08	9,533.41	41.55	.....	256,250.00	54,562.00	8,319.63	9,118.41	45	1	0
May, '16.....	14,155.00	12,468.85	12,858.75	12,150.24	1,296.25	318.61	159,200.00	49,900.00	13,900.00	11,657.99	51	4	0
June, '16.....	14,359.26	20,631.55	14,359.26	20,631.55	.....	.....	519,425.00	49,550.00	13,109.26	18,659.06	51	0	0
July, '16.....	8,598.40	6,187.46	8,518.40	6,187.46	80.00	.....	244,950.00	32,040.00	8,053.00	5,647.46	50	1	0
Aug., '16	12,843.16	29,452.67	12,730.46	29,452.67	112.70	.....	298,050.00	273,522.00	12,616.16	28,257.67	53	2	0
Sept.,'16.....	8,259.17	5,765.22	7,960.26	3,812.45	298.91	1,952.77	73,125.00	26,574 83	7,614.17	5,340.22	40	2	1
Oct.,'16.....	9,747.79	3,687.55	7,155.82	3,187.55	2,591.97	500.00	89,050.00	22,300.00	9,682.79	3,372.55	63	1	1
Nov.,'16.....	15,106.25	5,366.13	13,846.50	5,209.88	1,259.75	156.25	116,090.00	26,400.00	14,951.25	4,966.13	69	3	0
Grand Totals.	186,502.03	367,730.60	177,459.90	363,579.12	9,042.13	4,151.48	2,630,277.34	1,572,326.52	179,349.63	344,158.27	693	21	3

CAUSES OF FIRE BY MONTHS FOR THE FISCAL YEAR ENDING NOVEMBER 30, 1916

	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	July	Aug	Sep.	Oct.	Nov.	Total
Acid	1		1				1						3
Accident					1								1
Auto back fire	2	2	2									1	7
Back draught	1												1
Bonfire			1	1		1				1	1		5
Burglars			1										1
Burning brush											8		8
Burning flue	26	22	8	3	5	8	3	2	2	2	8	16	105
Burning grass									1		3	4	8
Burning grease	1			1				1	1	1	1	1	7
Burning sawdust											1		1
Burning oil							1					1	2
Broken water pipe								1					1
Careless smoking							1	1	3	3	3	1	12
Chemical explosion						1							1
Candles		1					1			2			4
Cigars	1	1		2	4		3	3	3			1	18
Cigarettes			1	4	2	1	2	3		2	1		16
Coal oil stove	1	1		1		2			1		1	1	8
Crossed wires			9	1								1	11
Coffee roaster							1						1
Defective flue	3	7	6	2	4	1	2	3	1		3	5	37
Defective fireplace	1	4									1		6
Defective furnace				1		1	1	1					4
Defective stove	2												2
Defective stovepipe	1	1			1								3
Defective wiring		2	1					1				1	5
Defective oil burner		1					1						2
Defective gas meter				1									1
Defective bake oven						1				1			2
Defective lamp									2				2
Defective gas hose										1			1
Dump, rubbish											7		7
Electric iron					2	2	1	3	2				10
Electric wires		5	1	1	1		1			1			10
Electric curling iron													
Escaping steam			1								1		2
Exp. molten metal			1	1						1			3
False alarm	2				2	1				3	2	3	13
Fireworks							1	1					2
Friction	1	1	1										3
Fumigating								1	1	1			3
Falling stove pipe		1				1							2
Gas explosion				2		1			1				4
Gas plate									1	1			2
Gas jet, def			1							1			2
Gasoline		2	2	1	1	2	1	1	5	3	3	1	22
Gas burner			1		1								2
Gas heater						1							1
Hot ashes	1		2		1		2	1	2			2	11
Hot sand							1			1			2
Hot slag												1	1
Illumination		3									1		4
Incendiary	1	2	1	1		1	1	1	1	1		1	11
Incendiary, supposed		1	2	4	1	3	1	2		1		2	17
Lamp explosion	1	1											2
Leaking gas	1		2					1					4
Leaking gasoline						1	1			2			4
Lamp close to wall								1					1
Mistaken alarm	1										1		2
Matches, children						4	2	2	3	1	4	1	17
Matches	4	4	3	2	2	1	1		7	2	3	1	30
Overheated furnace	3	2	1			1					1	1	9
Overheated flue	1								1	1	2	3	8
Overheated stove	13	5	8	1	1		1		1		1	3	34
Overheated stovepipe	2	3	2	1		2	1	3			1	1	16
Overheated kiln	1	1											2
Overturned lamp	1		1									1	3

CAUSES OF FIRE BY MONTHS FOR THE FISCAL YEAR ENDING NOVEMBER 30, 1916—Continued

	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	July	Aug.	Sep.	Oct.	Nov.	Total
Outside City	1	1				1	1	2	1	3	3	1	14
Open clean out		1									1		2
Overheated stack								1					1
Overheated transmis.								1					1
Overheated film										1			1
Pitch pot	1							1	1	1			4
Paint explosion							1					1	2
Paint on stove											1		1
Rubbish							1	1	1				3
Short circuit, auto										1			1
Short circuit	1		1				1			2			5
Smoke		1				1	2						4
Smoking furnace		1					2	1	2				6
Smoking stove	1			1									2
Smoking oil stove	1												1
Smoking in bed				1	1						1	1	4
Sparks	1	1	1			5	1		2	2	10		23
Sparks from stove	1	1											2
Sparks from furnace							1	1	1	1		1	5
Sparks from chimney		1	4	3	8	7	13	9	4	7	15	21	92
Sparks from stack						1				2	1		4
Sparks from fireplace		1											1
Stove, clothing near		1	2		1								4
Stove, wood near	1		1			1							3
Spontaneous comb.	1	1	4	3	2	2	1	1	4			1	20
Smouldering ruins		1	1		1			1	1	1			6
Sparks from motor			2						1	1			4
Sparks from bonfire			1		1				1				3
Smoking meat					1						1		2
Steam pipe							1						1
Sparks from forge								1					1
Sparks from locomo.										1	1		2
Torch	1	2				2							5
Thawing pipes		9											9
Tramps					3	1				2			6
Unknown	1	2		1	2	1	1	2	3	1	2	3	19
	84	97	77	40	49	59	58	55	62	57	94	84	816

BUREAU OF POLICE.

Portland, Oregon, January 1, 1917.

Hon. H. R. Albee, Mayor and Commissioner of Public Safety, Portland, Oregon.

Sir: I have the honor to submit herewith my fourth annual report of the Police Bureau of the Department of Public Safety, for the fiscal year ending November 30th, 1916.

The past year has been very successful, and we feel justly proud of the work accomplished by all branches and divisions of this Bureau. The officers are men to be appreciated. They are courteous to the public at all times and conduct themselves in a gentlemanly manner. During the entire year we have had only two men dismissed on account of conduct unbecoming an officer and have had very little occasion for reprimands.

At midnight, December 31st, 1915, the Oregon prohibition law went into effect, and while prohibition has a tendency to decrease certain kinds of crime, we now have this law to enforce, which requires careful attention on the part of the police officers.

The first of this year saw the passing of the twelve horses used by the mounted squad, and they were replaced by five Ford touring cars, which greatly increased the efficiency of this class of work in covering the outlying districts.

Special reports from Capt. C. E. Baty of the Detective Division, and Mrs. Lola G. Baldwin, Supt. of the Women's Protective Division, together with reports showing the various activities of the Bureau, are hereto attached and complete this report.

I wish to thank the Honorable Mayor, the Commissioners and all members of the administration for their hearty co-operation.

Respectfully submitted,

JOHN CLARK,
Chief of Police.

IN MEMORIAM

PATROLMAN J. J. McCARTHY

Appointed January 16, 1911.

Accidentally thrown from an automobile and killed July 21, 1916.

PATROLMAN S. R. HENNESSY

Appointed February 18, 1909.

Died October 6, 1916.

NUMERICAL STRENGTH OF THE FORCE

Total number of employees..... 300
Reinstated 4
Temporary appt. 8
—
12
Resigned 2
Dismissed 6
Died 2
Transferred 1
—
11
Total number of employees November 30th, 1916..... 299

1 Sergeant of Police promoted to Lieutenant of Police.
1 Patrolman promoted to Sergeant of Police.
1 temporary assistant W. P. Division regularly appointed.
1 temporary elevatorman regularly appointed.

1 Chief of Police.
1 Captain of Detectives.
3 Captains of Police.
2 Lieutenants of Police.
15 Sergeants of Police.
6 Detective Sergeants.
23 Detectives.
217 Patrolmen.
1 Harbor Master.
3 Harbor Patrol Engineers.
1 Grappler.
1 Superintendent — Women's Protective Division.
1 Assistant Superintendent — Women's Protective Division.
1 Assistant — Women's Protective Division.
2 Stenographers.
3 Matrons.
4 Engineers, Police Headquarters.
3 Janitors.
3 Elevatormen.
1 Temporary Clerk.
7 Temporary Patrolmen.
1 Temporary Janitor.
6 Patrolmen on leave of absence.
1 Janitor on leave of absence.

From the above mentioned number of Detectives and Patrolmen, the following are detailed:

Detectives:
1 Detective Sergeant as Bertillon Expert.
1 Detective as Bertillon Operator.
1 Detective as Dance Hall Inspector.
1 Detective as Parole Officer—Municipal Court.

Patrolmen:
1 in City Attorney's Office.
1 in District Attorney's Office.
1 in Municipal Court as Bailiff.
3 in Detective Division.
5 on Harbor Patrol.

REPORT OF SUPERINTENDENT OF WOMEN'S PROTECTIVE DIVISION FOR FISCAL YEAR ENDING NOVEMBER 30, 1916

Portland, Oregon, December 1, 1916.

John Clark, Chief of Police, Portland, Oregon.

Dear Sir: The Women's Protective Division, Department of Public Safety, respectfully submits the following report for the year 1916:

This Division is the only feature of municipal government, except the Free Employment Office, which is organized and maintained expressly for the benefit of girls and women. Therefore, to this department is referred a great diversity of work, and the office acts in close co-operation with all the women's organizations of this community. From the beginning we have had police power, and for several years have had state-wide authority as special agent to the Governor.

It would be interesting, if space would permit, to tell something of the various classes and needs of girls who apply. They represent every walk in life—the business girl, the country girl looking for a safe place in a strange city, the factory girl, the girl who is tempted and tried but is still true to her womanhood, and the other girl, she who has sinned or been sinned against.

The Court Docket is received each morning and we interview the women who are arrested, make investigations and bring to the Court such information as to home conditions as will help the Judge in his decisions.

During 1915 our records showed 619 new girls, and for 1916 we

earnestly hoped the number would be cut down, owing to prohibition; but this year we have had 612 new girls. However, we have observed that they have been of a different and more hopeful type, and we believe that this has been one of the most efficient years of the department. The elimination of liquor from the grill and roadhouse has been a great protection, and we have been able to turn our attention to other lines of work for the girl who really desires our help and profits by it.

The records show only 47 girls sent to institutions by us this year, as compared with 72 last year; thus proving greater self-control upon the part of the girl. The number of court cases in which this office was particularly interested has fallen from 163 last year to 139 in 1916. We have made 468 special investigations and have had 114 girls on our after-care list. There have been 22 girls placed on parole to the department. We furnished 388 meals and 138 lodgings to needy women and girls, thus saving them from great temptation. Special attention has been given by the nurse in this department to venereal cases, and free examination and treatment furnished. 2,133 private interviews have been granted. The incidental expenses for the year were $438.37.

We wish to thank Mayor Albee and the Commissioners for their interest and support, and acknowledge the valuable assistance given us by the Public Defender, Mr. David Robinson. We also wish to express our gratitude to Chief Clark, the Captains and the men of the Police Department, who have at all times aided us in our work.

Respectfully submitted,

LOLA G. BALDWIN,

Supt. Women's Protective Division.

PORTLAND POLICE DETECTIVE DIVISION

Portland, Oregon, December 1st, 1916.

John Clark, Esq., Chief of Police, Portland, Oregon.

Sir: I have the honor to submit herewith my annual report covering the work performed by the Detective Division for the year ending November 30th, 1916.

In this report is given a summary of the most important cases handled and cleared up during the entire fiscal year; also the annual report of the Bertillon and finger-print system in the Bureau, the amount of property recovered and the number of missing persons located.

We have caught a great many burglars and hold-up men in the past twelve months who have operated here, as well as those who have operated in other cities and been arrested here. We have also apprehended several very clever check forgers.

Inasmuch as the city is now under prohibition legislation, there has been a marked decrease in certain crimes, but on the other hand the attention of this department has been directed to the detection of the violation of the prohibition law.

We have been quite successful in keeping crime down to such an extent that a comparison of the total figures with that of last year's will show a substantial difference in favor of 1916.

We extend to His Honor, the Mayor, and the Members of the Commission, a cordial invitation to visit our department at any time, and we will welcome any suggestion for the improvement and benefit of our Bureau which they may make,

Respectfully submitted,

C. E. BATY,

Captain of Detectives.

SUMMARY OF CASES INVESTIGATED AND CLEARED UP DURING THE YEAR ENDING NOVEMBER 30, 1916

Cases	Reported	Cleared
Larceny	1760	877
Larceny from person	29	26
Larceny by bailee	12	12
Larceny by embezzlement	4	4
Forgery	35	35
Burglary	131	81
Holdups	21	11
Bunco	23	23
Fictitious checks	96	87
Carrying concealed weapons	7	7
Threat to kill	16	16
Assault with deadly weapon	12	12
Manslaughter	0	0
Attempted murder	3	3
Murder	8	8
Obtaining money by false pretenses	10	10
Pickpocket	6	6
Violating pawnshop ordinances	7	7
Rape	4	4
Violating Prohibition law	76	76
Arson	1	1
Extortion	1	1
Burglar tools in possession	2	2
Counterfeiters	2	2
Seduction	1	1
Kidnapping	1	1
White slave	1	1
Fugitives returned to Portland	21	21
Fugitives arrested for other cities	69	69
Miscellaneous cases	18	18
Total	2377	1422

Total arrests made by Detective Division	1179
Missing person located	227
Criminal circulars filed and indexed (approximately)	3500
Value of stolen property located and returned to owners (automobiles excluded)	$87,127.75

YEARLY REPORT OF BERTILLON AND FINGER-PRINT DEPARTMENT FOR THE YEAR ENDING NOVEMBER 30, 1916

Bertillon records received	4943
Finger-print records received	3392
Identifications made	217
Criminals photographed	236
Photographs printed for exchanges	3441
Photographs copied for local use	41
Photographs printed from copies	301
Number of cities exchanged with	10
Penitentiaries exchanged with	1

EXTRA

Prisoners photographed for Government..... 20 persons, 259 copies made
Persons photographed for Mrs. Baldwin..... 4 persons, 24 copies made
Persons photographed for Judge Langguth..... 10 persons, 10 copies made
Photographs of pickpockets and buncomen sent to Chief of Police J. K. Wilson, San Diego, Calif., for use in handling race track element gathered for races at Tia Juana, Mexico, November, 1916..... 50 copies made

ANNUAL REPORT OF CHIEF OF POLICE FOR YEAR 1916

No. of officers belonging to station	300
No. of arrests	12046
No. of males	10784
No. of foreigners	3862
No. of females	1262
No. of officers absent from duty (6499 days)	614
No. of minors (males)	781
No. of minors (females)	128
Males provided with lodgings	618
Females provided with lodgings.	17
NATURE OF CRIME	
Accepting earnings of a prostitute	6
Automobile, no light	455
Automobile, muffler open	38
Automobile, exceeding speed limit	766
Automobile, no license	15
Arson	3
Allow gambling	3
Wire tapping	3
Allow minor in pooiroom	18
Allow chickens to run at large	13
Allow stock to run at large	4
Persons lost	13
Attempt suicide	8
Attempt to commit robbery	1
Attempt to commit rape	3
After hours	64
Adultery	10
Assault and battery	190
Assault with a dangerous weapon	20
Assault with intent to kill	4
Assault armed with dangerous weapon	3
Assault and rob	12
Attempted burglary	5
Burglary	22
Burglar tools in possession	2
Glaring headlights	85
Assault	3
Speeding street car	2
Contempt of court	4
Cruelty to animals	18
Carrying concealed weapon	28
Cocaine in possession	1
Conduct business no license	37
Conduct bawdy house	78
Conduct disorderly house	5
Extortion	2
Conduct lottery game	133
Conduct opium joint	9
Conduct gambling game	48
Contributing to delinquency of minor	16
Commit nuisance	6
Chauffeur no license	13
Common prostitute	1
Drunkenness	2337
Drunk and disorderly	288
Disorderly conduct	557
Disorderly by fighting	73
Destruction of personal property	5
Disturb the public peace	4
Defrauding an innkeeper	19
Discharging firearms in city limits	3
Dangerous assault	1
Demented	66
Deserter	8
Expectorate on sidewalk	2
Eng She in possession	16
Employ female unlawfully	8
Fugitive from justice	70
Frequenting opium joint	46
Forgery	26
Gambling	151
Held as witness	142
Held for investigation	364
Highway robbery	7
Indecent act	2
Indecent and immoral act	110
Indecent exposure	7
Insane	3
Deceptive advertising	1
Interfere with an officer	5
Inmate of a bawdy house	3
Violation Wage law	1
Junk dealer no license	5
Keep dog no license	120
Leave team untied	12
Lottery tickets in possession	72
Larceny	288
Larceny in a store	14
Larceny from the person	13
Larceny in a dwelling	26
Larceny by bailee	22
Larceny by embezzlement	4
Lewd cohabitation	17
Lost children brought to the station	71
Injured persons assisted	55
Murder	7
Manslaughter	1
Kidnapping	2
Motorcycle speeding	224
Motorcycle no light	30
Minor in a pool room	20
Morphine in possession	1
Motorcycle, no license	4
Gross fraud	1
Violating Jitney ordinance	99
Agree to fix prices	12
Obstruct street car traffic	3
Obstruct sidewalk	11
Obstruct street	6

Obstruct street no red light	1
Obtaining money false pretense	24
Obtaining goods false pretenses	6
Opium in possession	13
Defrauding	2
Peddling no license	43
Place wife in house of prostitution	1
Prisoners en route	19
Open U. S. Mail	1
Make conveyance no title	2
Perjury	3
Poolroom open after hours	3
Point gun at another	1
Reckless driving	136
Ride bicycle on sidewalk	1
Ride motorcycle on sidewalk	2
Ride bicycle no light	23
Resisting an officer	7
Rape	3
Runaway children	47
Sell short weights and measures	5
Sell liquor no license	5
Sell impure foods	14
Sell liquor on Sunday	4
Minor possession tobacco	19
Violating parole	1
Sell liquor to person already intoxicated	1
Smoke opium	19
Riot	7
Incite Riot	2
Sick and destitute	134
Scavenger wagon no license	4
Scavenger wagon leaking	1
Safekeeping	2
Sodomy	3
Soliciting on street	9
Soliciting for prostitution	28
Lodger	14
Sell tobacco to a minor	26
Motorcycle muffler open	39
Seduction	2
Advocate committing felony	1
Stolen goods in possession	2
Sturdy beggars	39
Surrender to serve sentence	9
Trespass	62
Threaten to kill	23
Throw rubbish in street	1
Use profane language	60
Vagrancy	1216
Violate city ordinance	430
Violate pawn brokers ordinance	10
Vicious dog at large	8
Visit bawdy houses	3
Misbrand drugs	2
Visit lottery game	123
Visit gambling game	426
Violate mashers ordinance	5
Violate vehicle ordinance	7
Violate bill posters ordinance	17
Violate traffic ordinance	925
Violate building ordinance	23
Wife beating	1
White slavery	3
Maintain gambling device	6
Operate auto intoxicated	41
Hold for U. S.	25
Violate prohibition law	264
Business under assumed name.	1
Hypo needle in possession	1

MISCELLANEOUS

Auto reported stolen	440
Auto reported stolen and found	376
Ambulance calls	96
Accidents	570
Missing persons	496
Dead bodies	76
Dead animals	428
Defective lamps, arc	3112
Fire alarms given	282
Injured persons assisted	581
Lost children reported	626
Nuisance notices served	540
Sidewalk reported for repair	208
Street obstruction reported.	422
Stray teams put up	145
Suicides reported	44
Water running to waste	252
Motorcycle calls	2034
Wagon calls	4980
Municipal court receipts	$35,911.00
Board of prisoners city jail.	2,797.36

Respectfully submitted,

J. S. THOMPSON,
Record Clerk.

BUREAU OF HEALTH.

Hon. H. R. Albee, Mayor of the City of Portland, City Hall.

Dear Sir: In view of the fact that I have only been in charge of the Bureau of Health a very short time, I am only able to transmit a brief statistical report of the work accomplished by the Bureau during the year 1916.

Respectfully submitted,

JOHN G. ABELE, M. D.,
City Health Officer.

MEDICAL DIVISION

Recapitulation of Report of Chief Medical Inspector Dec. 1, 1915, to Nov. 30, 1916.

Civil Service examinations...	40	Rooms fumigated—	
Physical examinations	196	Diphtheria	148
School rooms fumigated	223	Scarlet fever	2,443
Vaccinated	19	Smallpox	253
Diphtheria quarantined	140	Tuberculosis	1,347
Diphtheria released	152	Ambulance calls	79
Scarlet fever quarantined.....	286	Visits	4,471
Scarlet fever released.....	298	Cultures	1,330
Smallpox quarantined	42	Antitoxin units	471,500
Smallpox released	32	Infantile paralysis quarant'd.	18
		Infantile paralysis released...	16

CONTAGIOUS DISEASES, 1916

	Dec., 1915	Jan. 1916	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Totals
Diphtheria	34	17	15	15	19	3	2	8	6	5	9	21	154
Typhoid fever	9	9	9	9	4	6	1	2	2	5	10	2	68
Smallpox	6	0	2	1	3	1	1	1	9	4	2	15	45
Scarlet fever	23	9	14	17	37	38	46	34	8	15	44	73	358
Measles	20	11	23	69	51	61	64	37	11	40	113	89	589
Whooping cough	3	11	11	24	33	15	11	9	2	1	2	9	131
Chickenpox	44	32	25	39	56	61	26	5	4	6	36	113	447
Mumps	0	0	0	0	1	13	15	3	3	3	2	13	53
Poliomylitis	0	0	0	0	0	0	0	0	0	3	14	1	18
Erysipelas	11	2	4	2	2	6	2	3	0	1	3	2	38
Tuberculosis	28	37	33	37	30	13	14	16	16	17	17	20	278
Meningitis (tubercular)	1	0	2	1	1	0	0	0	0	0	0	0	5
Leprosy	0	0	0	0	0	0	0	0	0	0	0	0	0
Meningitis (epidemic cerebrospinal)	0	0	0	0	0	0	0	0	0	0	0	2	2
Total	179	128	138	214	237	217	182	118	61	100	252	360	2186

REPORT OF BACTERIOLOGICAL LABORATORY FOR YEAR 1916

Diphtheria cultures	3,471
Sputum examinations for tubercle bacilli	309
Widal test for typhoid fever	129
Analysis of water	81
Bacterial counts of milk	5,442
Analysis of bacterial content of towels	5
Analysis of bacterial content of bread cloths	17
Analysis of swimming tank water	86
Analysis of Bull Run water, monthly	12
Examination of rats for bubonic plague	108
Analysis of urine for Civil Service examinations	239
Miscellaneous examinations	137
Examination of meats for food	54
Examination for Bacillus Aborticus	6
Examination for Negri bodies	5
Investigation of typhoid fever cases	64
Total	10,165
Klebs Loeffler blood serum tubes prepared	3,781

BACTERIOLOGICAL ANALYSIS OF BULL RUN WATER, DECEMBER 1, 1915, TO DECEMBER 1, 1916

Year	Month	Lab. No.	Bacteria Per C. C.
1915	December	272	3
1916	January	855½	6
1916	February	1301	2
1916	March	1899½	1
1916	April	2347½	3
1916	May	2734½	3
1916	June	2929	3
1916	July	3112	13
1916	August	3306	4
1916	September	3437	2
1916	October	3658	4
1916	November	4051	8
Total			52

Average per month, 4.

REPORT OF TUBERCULOSIS NURSE FOR YEAR 1916

Number of patients cared for	543
Number of nursing and advisory visits	1,032
Number of miscellaneous visits	311
Total number visits	1,343
Investigations, and deaths reported	189
Grand total visits	1,532
Total number of houses reported for fumigation	85

Free dispensary Tuesdays and Thursdays from 1 to 4 P. M.

REPORT OF TUBERCULOSIS DIVISION PORTLAND FREE DISPENSARY FOR YEAR ENDING MARCH 31, 1917.

Patients under observation April 1, 1916	67
New patients admitted during the year	189
Old patients readmitted during the year	51
Total number patients under observation	307

Patients Discharged During Year

Improved	8	Left city	26
Sanatoria	37	Died	1
St. San	17	Dis. self	4
Troutdale	18	Untraced	6
Open air	1	Remaining under observation on April 1, 1917	75
Gov. San	1	**Nurses' Visits to Homes**	
Hospital	6	Primary	50
Non tuberculous	77	Secondary	501
Non attendance	51	Total	551
Other care	15		

TUBERCULOSIS WORK

Number of patients under observation April 1, 1916	76
New patients admitted during the year	220
Old patients readmitted during the year	...
Total number patients under observation	296

Disposition of Patients

Improved	19	Left city	32
Sanatoria	64	Died	25
St. San	37	Untraced	11
Troutdale	25	Non tuberculosis	27
Open air		Dis. self	5
Gov. San	2	Patients discharged	219
Hospitals	7	Remaining under observation on April 1, 1917	77
Other care	29		

REPORT OF DENTAL CLINIC FOR FISCAL YEAR ENDING NOVEMBER 30, 1916

	No. of Patients	No. Root Canals Filled	Amalgam Fillings	Cement Fillings	Extractions	Cleanings	Treatm'ts	Pulps Capped	Totals
December, 1915	65	8	74	54	59	11	21	4	296
January, 1916	41	10	29	11	18	7	18	0	134
February	79	16	60	28	38	10	31	1	263
March	72	14	44	38	45	8	27	1	249
April	77	12	79	33	34	13	30	0	278
May	56	13	77	17	51	7	14	2	237
June	58	19	72	20	23	7	14	0	213
July	61	6	62	40	20	7	33	3	232
August	48	20	31	17	11	8	16	2	153
September	62	18	61	43	26	12	15	2	239
October	59	6	59	28	26	8	19	2	207
November	74	5	80	23	30	14	28	3	257
Totals	752	147	728	352	381	112	266	20	2758

REPORT OF SCHOOL INSPECTION DEC. 1, 1915 TO NOV. 30, 1916

Total No. children examined.	219,090	Scarlet fever	87
		Chickenpox	51
Enlarged tonsils	1,436	Mumps	54
Adenoids	2,555	Impetigo	116
Defective teeth	4,445	Ringworm	37
Defective hearing	45	Poison oak	5
Defective vision	317	Granulated eyelids	32
Home visits	456	Vaccinated	23
Pediculosis	644	Eczema	14
Pinkeye	4	Tonsilitis	37
Infantile paralysis	2	Cultures	562
Whooping cough	550	Goiter	30
Quarantined	4	Orthopedic defectives	12
La grippe	16	Taken to specialists	24
Measles	32	Miscellaneous diseases	124
Diphtheria	2	Permits	675
Scabies	67	Excluded	8

REPORT OF SCHOOL NURSE FOR YEAR 1916

Total number examined	19,833	Scarlet fever	79
		Mumps	120
Home visits	831	Taken to free dispensary	27
School visits	276	Diphtheria	8
Referred to specialists	174	Whooping cough	6
Miscellaneous calls	152	Impetigo	16
Contagious skin diseases	64	Measles	18
Cultures taken	204	Pinkeye	3
Referred to charities	21	Scabies	2
Chickenpox	46		

REPORT OF EMERGENCY HOSPITAL FOR THE YEAR 1916

	No. Treated During Month	No. Days in Hospital	Sent to Hospitals
December, 1915	86	120	5
January, 1916	67	159	5
February, 1916	96	168	10
March, 1916	62	91	6
April, 1916	72	81	7
May, 1916	102	186	12
June, 1916	83	117	4
July, 1916	95	130	10
August, 1916	70	60	5
September, 1916	65	86	3
October, 1916	85	97	7
November, 1916	70	69	5
Totals	953	1364	79

MILK DIVISION REPORT FOR YEAR 1916

DAIRY INSPECTION

Total dairy herds tested for tuberculosis	368
Dairy animals tested for tuberculosis	4,655
Dairy animals reacting	289
Dairy animals suspicious	33
Reactors slaughtered	311
Carcasses passed for food	236¼
Carcasses condemned	74¾
Number dairies inspected and scored	2,482
Inspections made of creameries and milk depots	543

MILK ANALYSIS

Samples of milk and cream analyzed	6,295
Number below chemical standard	.5%
Average butterfat in milk	4.15
Average solids-not-fat in milk	9.10
Average butterfat in cream	23.00

BACTERIAL COUNT OF CERTIFIED MILK

Under 10,000	94.0
Under 20,000	96.0
Under 50,000	100.0

BACTERIAL COUNT OF RAW DAIRY MILK DELIVERED BY PRODUCER

Under 10,000	54.85	Under 100,000	94.70
Under 20,000	74.30	Under 200,000	97.50
Under 50,000	89.00		

BACTERIAL COUNT OF RAW DAIRY MILK DELIVERED FROM CREAMERIES AND MILK DEPOTS

Under 10,000	45.15	Under 100,000	88.15
Under 20,000	62.33	Under 200,000	93.37
Under 50,000	79.73		

BACTERIAL COUNT OF PASTEURIZED MILK

Under 10,000	51.55	Under 100,000	91.00
Under 20,000	65.23	Under 200,000	95.20
Under 50,000	74.82		

AVERAGE BACTERIAL COUNT OF ENTIRE SUPPLY

Under 10,000	61.38	Under 100,000	93.46
Under 20,000	74.44	Under 200,000	96.51
Under 50,000	85.55		

TABULATION OF DEATHS FROM DIARRHEA AND ENTERITIS UNDER TWO YEARS OF AGE SINCE 1909

Year	No.	Per cent	Year	No.	Per cent
1909	100	32.6	1913	29	7.7
1910	73	21.5	1914	15	3.6
1911	57	15.2	1915	14	3.4
1912	38	9.3	1916	12	3.0

MEAT INSPECTION DIVISION MARCH 1 to DEC. 1, 1916

NUMBER ANTE MORTEM INSPECTIONS

Cattle	889
Hogs	1,293
Calves	52
Sheep	169
Total	2,403

NUMBER ANTE MORTEM INSPECTIONS HELD AND CARCASSES PASSED FOR FOOD

Cattle	4,312
Hogs	16,264
Calves	21,615
Sheep	3,989
Goats	64
Bear	5
Total	46,249

POST MORTEM EXAMINATIONS MADE AND CARCASSES CONDEMNED

Cattle	15
Hogs	55
Calves	51
Sheep	24
Total	145

Pounds of primal parts condemned	7,084
Pounds of meat condemned (other than whole carcasses and primal parts, sour, spoiled, abscesses)	5,666
Pounds of hog's heads condemned (tuberculosis)	783
Number of organs condemned (livers, hearts)	2,063
Carcasses passed for sterilization	15
Carcasses retained for refrigeration, cystercircus bovis	15
Carcasses released from refrigeration	15
Post mortems held on cattle that reacted to the Tuberculin test	189
Post mortem examinations held on cattle tested by city veterinarians	101

Carcasses passed for food	75¾
Carcasses condemned	25¼
Total	101

Cattle tested by state officials	87

Carcasses passed for food	42
Carcasses condemned	45
Total	87

SANITARY DIVISION REPORT FOR YEAR 1916

MARKET INSPECTION

Inspections made	13,082	Orders to cover food	857
Reinspections made	3,427	Garbage cans ordered	487
Complaints by citizens	1,980	Loads of rubbish destroyed	263
Notices served, written	762	Money refunded	$452.65
Notices served, verbal	3,723	Fines	105.00

Condemned

	lbs.		lbs.
Veal	2,294	Walnuts	1,077
Pork	7,768	Mince meat	200
Beef	1,212	Flour	100
Fish	7,968	Sugar	1,658
Poultry	6,329	Melons	1,941
Fruit	44,740		Boxes
Vegetables	87,080	Berries	5,460

SANITARY DIVISION

Inspections made	5,027	Garbage cans ordered	273
Reinspections made	5,833	Loads of rubbish destroyed	998
Complaints by citizens	1,570	Basements ordered cleaned	56
Notices served, written	485	Buildings closed	25
Notices served, verbal	3,383		

VITAL STATISTICS—TABULATION OF BIRTHS, 1916

	Male	Female	White	Brown	Black	Yellow
December, 1915	169	166	324	7	2	2
January, 1916	204	157	354	7	0	0
February, 1916	185	177	355	5	0	2
March, 1916	174	176	342	5	2	1
April, 1916	166	160	320	5	0	1
May, 1916	194	175	358	7	1	3
June, 1916	157	137	388	2	2	2
July, 1916	175	164	337	1	0	1
August, 1916	170	174	340	2	0	2
September, 1916	161	180	333	6	0	2
October, 1916	154	145	287	9	0	3
November, 1916	159	131	283	6	0	1
Totals	2068	1942	3921	62	7	20

Total number of births 4,010

VITAL STATISTICS—GENERAL DISEASES

GENERAL DISEASES	Dec., 1915	Jan. 1916	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Totals
Typhoid fever	2	1	4	2	2	1	1	0	0	0	1	0	14
Malaria	1	0	0	0	0	0	0	0	0	0	0	0	1
Measles	0	0	0	0	1	0	0	1	0	0	0	0	2
Scarlet fever	1	0	0	0	0	0	0	1	0	0	0	0	2
Whooping cough	0	0	2	1	1	1	2	0	1	0	0	0	8
Diphtheria and croup	0	1	2	0	1	0	1	0	0	1	0	1	7
Influenza	3	18	3	2	5	1	0	1	0	0	0	2	35
Erysipelas	1	0	1	0	0	1	0	0	0	0	0	0	3
Purulent infection and septicemia	0	0	1	0	0	0	0	0	0	2	0	1	4
Mycosis	0	0	0	1	0	0	0	0	0	0	0	0	1
Tuberculosis of lungs	15	15	21	21	9	7	14	12	14	12	14	11	165
Tuberculosis, disseminated	1	0	0	1	1	0	0	0	0	0	0	1	4
Tuberculosis of meninges	1	1	7	2	5	2	3	3	3	1	3	2	33
Abdominal tuberculosis	0	0	1	9	1	2	1	1	1	1	0	4	12
Pott's disease	1	0	0	1	0	0	0	0	0	0	0	0	2
White swelling	0	0	1	0	1	0	0	0	0	0	0	0	2
Tuberculosis, other organs	0	1	0	0	0	0	0	0	1	1	0	2	5
General tuberculosis	0	0	0	0	0	1	0	0	0	0	0	0	1
Acute miliary tuberculosis	1	2	1	0	2	0	1	0	1	0	0	0	8
Syphilis	2	1	0	2	0	2	1	1	2	2	0	2	15
Gonorrhea (over 5 years)	0	0	0	0	0	1	0	0	0	0	3	0	4
Gonorrhea (under 5 years)	0	0	0	0	0	0	0	0	1	0	1	0	2
Cancer of buccal cavity	0	1	0	0	0	1	0	1	1	0	1	3	8
Cancer of stomach and liver	5	13	6	7	5	8	5	8	10	14	4	12	97
Cancer of peritoneum, intestines and rectum	3	7	4	5	2	2	1	2	4	2	5	0	37
Cancer of female genital organs	2	3	3	3	3	4	2	1	4	2	5	5	37
Cancer of breast	3	3	0	2	1	2	4	0	4	1	2	1	23
Cancer of skin	0	0	2	0	0	0	0	1	0	0	1	0	4
Cancer of other organs	3	3	4	2	3	2	5	7	7	2	2	4	44
Other tumors	0	1	0	0	1	1	0	1	1	2	0	0	7
Acute artic. rheumatism	1	1	0	0	0	3	1	0	1	0	0	1	8
Diabetes	5	6	3	6	3	3	1	1	4	4	3	4	43
Exophthalmic goiter	1	0	0	0	1	1	0	0	0	1	1	0	5
Addison's disease	0	1	0	0	0	0	1	0	0	0	0	0	2
Leukemia	1	2	1	0	0	1	0	1	0	1	0	1	8
Anemia, chlorosis	1	3	0	1	4	4	2	2	3	4	0	4	28
Alcoholism	0	0	0	0	0	1	0	0	0	0	0	0	1
Chr. lead poisoning	0	0	1	0	0	0	0	0	0	0	0	0	1
Other general diseases	0	1	0	1	2	2	0	0	0	0	0	0	6
	54	85	68	60	54	54	46	45	63	53	46	61	689
NERVOUS SYSTEM													
Encephalitis	0	0	1	0	0	0	0	0	0	0	0	0	1
Simple meningitis	6	0	0	0	2	2	0	2	2	0	1	6	21
Epidemic cerebro-spinal meningitis	0	0	0	0	0	0	0	0	0	0	0	1	1
Progressive locomotor ataxia	0	1	0	0	1	1	0	0	0	0	0	0	3
Other diseases of spinal cord	3	3	3	2	0	0	1	1	1	1	0	4	19
Congestion and hemorrhage of brain	11	16	12	16	11	9	11	9	10	9	10	14	138
Softening of brain	0	0	0	0	0	0	0	0	1	0	0	0	1
Paralysis without specified cause	2	2	0	2	0	4	1	0	3	1	0	2	17
General paralysis of insane	0	0	1	0	1	0	0	0	0	0	0	0	2
Other forms of mental alienation	0	0	0	0	0	1	0	0	0	0	0	0	1
Epilepsy	0	0	0	1	1	0	1	0	0	0	1	1	5
Convulsions (non-puerperal, over 5 years)	0	0	0	0	0	0	0	1	0	0	0	0	1
Convulsions (under 5 years)	0	1	1	0	0	1	0	0	1	0	1	0	5
Neuralgia and neuritis	0	0	0	0	0	0	0	1	0	0	0	1	2
Tetanus	0	0	0	0	0	0	0	0	0	0	1	0	1
Other diseases of nervous system	0	1	0	1	1	0	0	0	2	0	0	2	7
Diseases of the ear	0	0	0	0	0	0	0	1	1	0	1	2	5
Totals	22	24	18	22	17	18	14	15	21	11	15	33	230

VITAL STATISTICS—GENERAL DISEASES—Continued

CIRCULATORY SYSTEM	Dec., 1915	Jan. 1916	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Totals
Pericarditis	0	0	0	0	1	0	0	0	0	0	0	0	1
Acute endocarditis	0	1	3	1	3	1	0	1	0	2	4	1	17
Organic diseases of the heart	32	34	23	32	19	21	26	24	22	21	21	14	289
Angina pectoris	1	3	1	0	2	3	1	2	0	1	2	5	21
Diseases of arteries	3	3	3	5	4	5	3	3	2	2	7	6	46
Embolism and thrombosis	1	1	0	0	0	1	1	1	2	0	3	1	11
Diseases of veins	0	0	0	0	0	0	1	0	0	0	1	0	2
Diseases of lymphatic system	0	1	0	0	0	0	1	0	0	0	0	0	2
Hemorrhages	0	0	0	1	0	0	0	0	0	0	0	0	1
Total	37	43	30	39	29	31	33	31	26	26	38	27	390
RESPIRATORY SYSTEM													
Diseases of nasal fossae	0	0	0	0	0	0	0	0	0	0	0	1	1
Diseases of larynx	0	0	0	1	1	0	0	0	0	0	0	0	2
Diseases of thyroid body	0	0	1	0	0	0	0	0	0	0	0	0	1
Acute bronchitis	1	2	0	1	2	0	1	0	0	0	0	1	8
Chronic bronchitis	0	1	1	0	0	1	2	2	0	0	0	0	7
Bronco-pneumonia	5	11	6	3	1	5	1	2	3	1	2	5	45
Pneumonia (lobar)	17	27	15	9	7	6	7	2	6	4	5	15	120
Pleurisy	1	0	0	0	0	0	1	1	1	0	0	0	4
Congestion of lungs	0	0	2	0	0	0	1	0	0	1	1	1	6
Gangrene of lungs	0	0	0	0	0	1	0	0	1	0	0	0	2
Asthma	1	0	0	0	0	0	0	0	0	1	1	1	4
Other diseases of respiratory system	0	1	0	2	1	2	0	0	0	2	0	3	11
	25	42	25	16	12	15	13	7	11	9	9	27	211
DIGESTIVE SYSTEM													
Diseases of mouth and adnexa	0	0	0	0	0	0	0	0	1	0	1	0	2
Diseases of pharynx	1	0	0	0	0	0	1	1	0	0	0	0	3
Ulcer of stomach	1	1	1	2	2	3	1	0	3	2	2	2	20
Other diseases of stomach	0	0	0	1	2	1	1	2	2	0	2	1	12
Diarrhea and enteritis (under 2 yrs)	0	5	2	3	2	1	3	1	1	0	2	1	21
Diarrhea and enteritis (over 2 yrs)	0	0	2	0	0	4	1	1	1	1	2	0	12
Intestinal parasites	4	0	0	0	0	0	0	0	0	0	0	0	4
Hernia, intestinal obstruction	3	3	1	2	4	8	2	2	4	0	2	4	35
Other diseases of intestines	0	2	1	2	0	0	0	1	0	0	0	0	6
Cirrhosis of liver	4	3	4	0	1	1	1	1	4	2	2	1	24
Biliary calculi	0	0	0	2	2	0	0	0	1	0	1	0	6
Other diseases of liver	0	1	1	0	1	1	0	0	1	2	0	1	8
Diseases of spleen	0	0	0	0	0	0	0	0	0	0	0	1	1
Simple peritonitis (non-puerperal)	1	0	1	1	0	0	1	0	3	0	0	0	7
Appendicitis	3	3	3	3	2	3	3	2	0	2	4	1	29
Other diseases of digestive system	0	0	0	0	0	0	0	0	0	1	0	0	1
Totals	17	18	16	16	16	22	14	11	21	10	18	12	191
GENITO-URINARY SYSTEM													
Acute nephritis	4	0	2	1	2	0	1	1	0	1	2	1	15
Bright's disease	18	14	9	13	17	16	14	14	9	11	9	9	153
Other diseases of kidneys	0	0	0	1	0	2	0	0	0	0	0	0	3
Calculi of urinary tract	0	0	0	0	0	1	0	0	0	0	1	0	2
Diseases of bladder	0	0	0	0	2	0	0	0	1	0	0	1	4
Diseases of uretha	0	0	0	0	0	0	0	0	1	1	1	0	3
Diseases of prostate	2	0	1	0	0	2	1	3	3	1	3	0	16
Salpingitis	0	1	1	0	1	0	0	0	0	0	0	0	3
Uterine tumor	0	1	1	0	1	0	0	0	0	0	1	0	4
Other diseases of the uterus	0	0	0	2	3	0	0	0	0	1	0	0	6
Cysts and other tumors	0	0	0	1	0	0	0	1	0	0	1	0	3
Totals	24	16	14	18	26	21	16	19	14	15	18	11	212

VITAL STATISTICS—GENERAL DISEASES—Continued

THE PUERPERAL STATE	Dec., 1915	Jan. 1916	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Totals
Accidents of pregnancy	0	1	2	0	1	0	0	1	0	0	0	2	7
Puerperal hemorrhage	0	1	0	0	0	0	0	0	0	0	0	0	1
Other accidents of labor	0	0	0	0	0	0	0	0	1	0	0	0	1
Puerperal septicemia	0	3	0	2	0	0	0	2	0	1	0	1	9
Puerperal albuminuria	0	0	2	2	0	0	0	0	0	0	0	0	4
Puerperal phlegmasia	1	0	1	1	0	1	0	1	0	0	0	0	5
Other puerperal accidents	1	0	1	1	0	0	0	0	0	0	0	0	3
	2	5	6	6	1	1	0	4	1	1	0	3	30
DISEASES OF SKIN AND CELLULAR TISSUE													
Gangrene	0	1	2	1	2	0	2	0	0	0	0	1	9
Other diseases of skin	0	0	1	0	0	0	0	0	0	0	0	0	1
Totals	0	1	3	1	2	0	2	0	0	0	0	1	10
DISEASES OF BONES AND ORGANS OF LOCOMOTION													
Diseases of bones	0	1	0	0	1	2	1	0	0	1	1	1	8
Diseases of joints	0	0	0	0	0	0	0	0	1	0	0	0	1
Totals	0	1	0	0	1	2	1	0	1	1	1	1	9
MALFORMATIONS													
Other congenital malformations	2	1	1	0	2	3	2	2	1	0	2	0	16
Hydrocephalus	0	0	0	1	0	1	0	0	0	0	1	1	4
Malformations of heart	3	0	4	1	0	0	0	0	0	0	4	5	13
Totals	5	1	5	2	2	4	2	2	1	0	4	5	33
EARLY INFANCY													
Congenital debility	6	0	4	2	7	3	1	6	0	3	2	3	37
Premature	3	11	6	6	3	4	4	4	3	3	4	3	54
Other causes peculiar to early infancy	2	0	1	2	2	1	3	0	1	0	0	1	13
Injuries at birth	1	0	0	0	0	0	0	0	0	0	0	0	1
Lack of care	1	0	0	0	0	0	1	0	0	0	0	0	2
Totals	13	11	11	10	12	8	9	10	4	6	6	7	107
OLD AGE													
Senile debility	9	10	6	6	2	2	7	4	5	8	3	3	65
Totals	9	10	6	6	2	2	7	4	5	8	3	3	65
ILL-DEFINED DISEASES													
Ill-defined organic diseases	0	0	0	0	0	0	0	0	1	0	0	0	1
Totals	0	0	0	0	0	0	0	0	1	0	0	0	1

VITAL STATISTICS—GENERAL DISEASES—Continued

EXTERNAL CAUSES	Dec., 1915	Jan. 1916	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Totals
Suicide by poison	1	1	4	1	3	0	1	0	1	1	0	2	15
Suicide by asphyxia	1	0	0	0	1	0	0	0	1	0	0	1	4
Suicide by hanging	0	1	1	0	0	1	1	0	0	0	0	0	4
Suicide by drowning	0	0	0	0	0	1	0	0	0	0	0	1	2
Suicide by firearms	2	3	0	1	3	2	3	3	1	1	2	0	21
Suicide by cutting	0	0	0	0	0	0	0	0	1	0	0	1	2
Accidental, railroads	0	1	1	1	0	2	1	0	0	1	1	2	10
Accidental fall	0	1	1	1	1	5	3	1	6	2	1	2	24
Accidental, auto	1	0	2	1	0	0	0	5	0	1	1	2	13
Burns	0	0	0	2	1	2	0	1	2	0	1	1	10
Accidental, crushing	0	0	1	1	1	5	1	0	1	2	1	1	14
Freezing	0	0	0	0	0	0	0	0	1	0	0	0	1
Electric shock	0	0	0	1	0	1	0	0	1	0	0	0	3
Accidental, drowning	2	0	3	1	2	0	1	2	5	1	0	1	18
Accidental, machines	0	1	0	0	2	0	0	0	0	0	0	0	3
Absorption of deleterious gases	0	0	0	0	0	3	1	0	1	0	0	0	5
Other acute poisonings (non-suicidal)	0	0	1	0	0	1	0	0	0	1	0	0	3
Accidental, firearms	0	2	0	0	1	0	0	1	1	0	0	1	6
Other external violence	1	1	0	0	0	1	0	1	0	2	0	0	6
Homicide by firearms	1	1	2	0	0	0	0	0	0	2	0	0	6
Homicide by cutting	1	0	0	0	0	0	0	0	0	0	0	0	1
Accidental, street car	1	0	0	0	0	1	0	0	0	0	1	0	3
Accidental, bicycle	0	0	0	1	0	0	0	0	0	0	0	0	1
Accidental, wagon	0	0	0	0	0	0	1	1	0	0	0	0	2
Injured by animals	0	0	0	0	0	0	0	0	1	0	0	0	1
Accidental, motorcycle	0	0	0	0	0	1	0	0	0	0	1	0	2
Totals	11	12	16	12	15	26	13	15	23	14	9	15	180

MUNICIPAL COURT

February 27, 1917.

To the Honorable H. R. Albee, Mayor, Portland, Oregon.

My Dear Sir: Before retiring from the Municipal Bench on March 1st, 1917, I beg leave to submit a report of the doings of the Municipal Court of the City of Portland, Oregon, from November 30th, 1915, to December 1st, 1916, and to say, that during the period just above mentioned, 8,510 complaints were filed; $33,039.00 were collected in the form of fines; $2,652 in forfeitures and $220 as costs, making a total of $35,911.

There were 162 cases tried before the court, without a jury, for the violation of the prohibition law; 10 of these were discharged and 152 convicted, many of them pleading guilty. During the same period there were 46 cases for the violation of the prohibition law tried before juries; 25 were discharged and 19 convicted. In two cases the jury disagreed. The enforcement of the prohibition law has greatly reduced the number of arrests for drunkenness, but greatly increased the number of jury trials, many of which require a great deal of time, and one of which required five afternoons and one evening to hear. Twelve jury trials have made necessary the holding of evening sessions during this period.

An encouraging feature that has made itself apparent in the Municipal Court, is that since the closing of the saloon and the advent of prohibition, very few young men are brought in on the charge of drunkenness, which indicates to my mind the hopeful sign that the younger generation is growing better and will be safer from the temptation in the future, especially so when by the process of education the young are taught to shun and avoid intoxicating liquors as they would narcotics and other dangerous drugs.

Immediately after the closing of the saloon, January 1st, 1916, the demand for ethyl alcohol became apparent and the drug stores of the city were supplying a rapidly increasing demand. The alcohol sales in one downtown drug store during the month of January, 1916, were 54 bottles. The alcohol sales by this same store increased each month, until during the month of September, 1916, they had reached 1,102 bottles. The sales of ethyl alcohol in nearly every drug store in the city, where sold, showed an ever increasing demand each month over the previous month. That alcohol was being used for beverage purposes by many people was very apparent, as the docket of this Court showed almost daily that from thirty to seventy per cent of the arrests for drunkenness were caused by the use of ethyl alcohol in water, grape juice or some other so-called soft drink. We have observed that many of the users of ethyl alcohol as a beverage have suffered serious injury to their eye-sight and general health; suffering hallucinations in various forms and many having died from the effects of alcohol.

"The Morals Court and Court of Domestic Relations," established May 23, 1914, during the incumbency of former Judge John H. Stevenson, has been continued, and the sessions held in the small court room adjoining the main court room. Here the witnesses are relieved from the annoyance and embarrassment of appearing before morbidly curious people. The sessions of the Morals Court are not to be understood

to be secret, nor are they designed to deprive anyone of a public trial. They are always open to anyone who has any right whatever to be there, but they are impliedly closed to those whose interest is purely that of indecent curiosity.

I am pleased to report that the matrons in charge of the women's ward in the City Jail have faithfully striven to encourage the women serving sentences in the City Jail to take advantage of the industrial feature you authorized me to inaugurate, wherein each woman is permitted to do some kind of sewing or needle work not to exceed four hours each day, and for each eight hours of work one day is cut off of her sentence; besides this, when she has finished her sentence and goes out, she is to receive fifteen cents for every eight hours she has devoted to actual work. In many cases women go out of jail with more money than they had when they came in, and some of them have for the first time actually learned how to sew.

The Women's Protective Bureau has done a great deal to make the Morals Court and the Court of Domestic Relations what it is and should be, and has co-operated with and assisted the matrons in furnishing employment to the women in the industrial department of the City Jail.

The Public Defender has rendered excellent services in looking after the interests of accused who are unable to present a defense for themselves. He has been of incalculable assistance to the Judge in investigating cases before the opening of court and has served as an assistant to the Court. On many occasions I have referred petty cases, such as neighborhood quarrels, simple assault and battery cases, and the like to the Public Defender for adjustment and generally with success. The Public Defender has also acted as Probation Officer in scores of cases where I have deemed it advisable to suspend sentence and require the defendant to periodically report, and in that way keep in touch with the Court and the Court with the defendant.

Deputy City Attorney F. W. Stadter, assigned to the Municipal Court, has rendered the City splendid services by his adaptation to the work and his splendid judgment in weighing the facts presented before issuing complaints in City cases, and in this connection I would suggest that the City Attorney's services should be refused in all assault and battery cases that occur in places other than on the public streets or in public places. If the complaining witness was required to employ his own counsel to prosecute an assault and battery case, fewer cases would require the Court's time in being heard.

The plan inaugurated before I came to this Court permitting fines to be paid in installments is a good one, and the right to remit out of consideration of clemency should not be impaired, as it is a very effective plan of probation and gives the Court such control as it should have.

Respectfully submitted,

ARTHUR LANGGUTH,
Municipal Judge.

BUREAU OF HARBOR PATROL

December 1, 1916.

Honorable H. R. Albee, Mayor of the City of Portland.

Dear Sir: I have the honor to submit the following report of the operation of this Bureau for the year ending November 30, 1916, together with the report showing the imports to and exports from this port.

General supervision of the harbor and docks has been maintained during the year, and all rules and regulations have been strictly enforced whenever and wherever practical. Constant patrol of the harbor and docks has been maintained both night and day by officers of the Harbor Patrol service.

Incoming passenger vessels when arriving at their docks have been attended by officers of this Bureau to regulate the hotel runners, assist newly arrived persons with information desired by them, regulating traffic and maintaining order on the docks.

Strict watch has been kept on vessels arriving from foreign ports that are deemed infected by U. S. medical authorities. This to prevent the spread of any contagious disease.

On June 18th, two young men named Albert Paul and J. Breath, residing at 144 W. Kilpatrick Street, came near drowning by the overturning of their canoe. They were pulled out by the Harbor Patrol boat and taken to quarters, and after their clothes had been dried they were sent home.

By the strict enforcement of the safety net ordinance beneath ships gangways no loss of life by falling from gangways of ships in this harbor has occured this year.

War ships visiting this port were supplied with moorings and given every assistance and facility the port had in its power.

Snags and other obstructions to navigation were removed from the channel by the Harbor Patrol boat.

Several street ends on the water front that had been used at times for storage and dumping grounds have been cleaned and waste material carried away.

Boat and launch equipment that were stolen and recovered by officers of the Harbor Patrol service were returned to the owners.

On June 1st, I was ordered to take charge of the water front strike. This strike began June 1st and was called off August 26th. During this time no steamboat was delayed, nor was freight or passengers interfered with, and I am glad to be able to state that no fatalities occurred.

At this time I desire to place before Your Honor's attention the names of Harbor Patrol Officers Gordon, Powell, Tilton, Hanson and Engineer Prehn of the Harbor Patrol boat. These officers were compelled at times to work through a period of eighteen hours. At no time during the periods of the strike did they fail to cheerfully respond to duty when called upon.

During the Rose Festival over 50,000 people visited the warships moored in our harbor, and am glad to be able to state that no accidents of any kind occurred.

Newly arriving vessels are boarded and masters informed as to

harbor regulations, and are under supervision at all times that these regulations are carried out.

Information as to the handling of shipping at this port has been given other cities at their request, and shipping records furnished representatives of foreign countries when requested.

This office has been working in co-operation with the U. S. Internal Revenue, U. S. Customs, U. S. Engineers, Sheriff and District Attorney's office. Forty gallons of whiskey was taken from a steamer in this harbor and was seized by Officer Gordon, and the parties connected therewith were arrested for violation of the prohibition law.

Particular attention has been given the placing of material on river banks that might be carried into the channel by high water and thereby cause unnecessary shoaling of the river.

The Harbor Patrol boat has covered 4,574 miles.

During the times of racing, swimming or other water sports on the river, the patrol boat with officers has always been in attendance. This for the prevention of any serious accidents.

The time has now come, in my judgment, when active measures should be taken for the opening of the river channel west of Swan Island, so that this water may be used by all vessels and the land areas fronting thereon be utilized in sea and river transportation.

The improvement of the west channel and the maintenance of the east channel will be of immense benefit to the port and directly contribute to the increase of its tonnage.

The maritime commerce of the port is, of course, dependent upon navigable condition of the river to the sea. In the past Portland suffered from insufficient depths in places in the river and on the bar, but owing to the improvements during the past year by the United States Engineers and the Port of Portland this is happily a memory and not a present condition.

The depths in the river are amply sufficient for the requirements of ships of large draft and there is now no bar at the mouth of the Columbia River. Where the bar once was, there is now a clean body of water forty feet deep and fifteen hundred feet wide, with two straight courses plainly marked by the usual aids to navigation, and in the opinion of all engineers having to do with the river, the condition is permanent. By comparison with other great world ports, Portland can claim one of the easiest and safest entrances of them all. No ship is now bar-bound except in exceptionally stormy weather and in times of dense fogs; conditions that would prevent ships from entering or leaving any other port.

In submitting this, my annual report for the year ending November 30, 1916, I desire to thank the Honorable Mayor and members of the Council for their co-operation and support in all matters appertaining to this Bureau.

Respectfully submitted,

J. SPEIER,
Harbormaster.

OPERATION OF HARBOR PATROL BOAT FOR YEAR 1916

Miles covered during the year	4,574
Gallons of distillate for fuel used	2,300
Gallons of gasoline	230
Gallons of lubricating oil	114
Runs made	520
Hours running time of engine	954
Snags menacing navigation removed by harbor patrol boat	64
Fire boat calls answered	31
Violations of U. S. Gov. regulations found and reported	15
Launches found disabled at different points on river and taken in tow by harbor patrol boat	9
Cases requiring use of patrol boat	180
Boats recovered and turned over to owner	20
Drownings during the year	25

When bodies were recovered they were brought to patrol boat headquarters by patrol boat and turned over to coroner's office

FUEL OIL AND REFINED PETROLEUM PRODUCTS DELIVERED AT PORTLAND BY OCEAN GOING VESSELS YEAR 1916

Barrels of fuel oil	3,783,298
Barrels of lubricating oil	3,491
Barrels of refined oil	70,224
Barrels of distillate	934,425
Gallons of gasoline	11,801,050

PASSENGERS ARRIVING AND DEPARTING BY OCEAN GOING VESSELS

Passengers arriving	29,144
Passengers departing	38,628
Total	67,772

LOCAL RIVER TRAFFIC FOR CALENDAR YEAR

Passengers carried	301,869
Tons of freight	4,664,934
Value of freight	$26,896,332

DROWNINGS AND BODIES RECOVERED DURING YEAR ENDING NOV. 30, 1916

Feb. 8, 1916....	Captain Payne of the U. S. E. Dredge Chinook picked up a floater and tied him up to launch Argosy at St. Johns.
Feb. 13, 1916....	H. Gammie and C. Kirkpatrick drowned above Oregon City. Patroled upper harbor looking for bodies; Brady sent to the scene.
Feb. 13, 1916....	A man was reported to have fallen from the S. P. &. S. Bridge when the S. S. Roanoke was passing through. His body was never recovered.
Feb. 16, 1916....	Captain Hill drowned at the foot of East Madison street. Body recovered by Brady.
Feb. 16, 1916....	George Held drowned from the Steamer J. N. Teal at the foot of East Yamhill street. Body recovered by Captain Speier.
Mar. 9, 1916....	Marcel Bugue, 18 years old, a sailor on the French bark Joineville, was drowned from the ship at Irving dock.
Mar. 28, 1916....	Body of C. Kirkpatrick found floating at Postoffice Bar.
Mar. 29, 1916....	Arley Louise Vahl drowned at the foot of East 21st street North. Brady recovered the body.
April 16, 1916....	Ernest Hendreckson, three years old, of 1710 Macadam, drowned at Webber's tannery. Body recovered by Rudolph Zak.
April 23, 1916....	J. M. Hansel, 29 years old, Dredge Portland. Drowned from fuel barge. Body recovered by Brady.
April 29, 1916....	John Nusbaumer, 17 years old, of North Plains, drowned in Willamette Slough near Burlington. Body recovered by other parties.
May 20, 1916....	Body of Marcel Bugue found floating at Peninsula Lumber Company.
May 20, 1916....	Body of Miss Harris found floating in Columbia Slough.
May 22, 1916....	Mrs. Keck drowned herslf in a watering trough on the Taylor Ferry Road.
June 11, 1916....	Harold Gladden drowned at Oregon City.
June 17, 1916....	Harry Gohun, 11 years, of 295 Tenth street, drowned near Portland Shipyards. Body recovered by John Starkey.
June 20, 1916....	Bill Moudy drowned from Steamer Lurline at mouth of Willamette.
July 11, 1916....	Floater found under Broadway Bridge.
July 22, 1916....	John Atbok drowned below the North Portland Mill.
Aug. 18, 1916....	Stanton Bonbright drowned at lower end of Hardtack Island. Body recovered Aug. 19, 1916, by Brady.
Aug. 25, 1916....	Henry Hays, 12 years, of 489 22nd street, and Jessie Goodwin, 10 years, of 624 Guiles street, drowned near North Portland Mill. Bodies recovered by Wm. Morris.
Aug. 27, 1916....	Arthur Clark, of 628 Ivanhoe street, drowned at lower end of Swan Island. Body recovered by Engineer Jaeckel.
Sept. 3, 1916....	A. B. Richardson, 50 years, of 269 14th street, drowned at Windemuth. Found floating off Pine street, Sept. 6.
Nov. 12, 1916....	The body of a woman named Bess was found floating off the foot of Washington street.
Nov. 13, 1916....	Frank Enochs drowned from the Steamer Oregona at the O. & C. Dock. Body recovered by Brady.

These bodies when recovered were brought to the Harbor Patrol landing by the Harbor Patrol Boat and turned over to the coroner.

SNAGS REMOVED FROM CHANNEL BY HARBOR PATROL BOAT DURING YEAR 1916

May 23, 1916—Channel to Oak street.
July 22, 1916—Swan Island to Port of Portland drydock.
Aug. 10, 1916—Portland Flouring Mills to Swan Island.
Aug. 10, 1916—Ross Island to Oak street.
Aug. 13, 1916—Jones Mill to Oak street.
Aug. 14, 1916—Channel to Oak street.
Aug. 22, 1916—Inman-Poulson Mill to Oak street.
Aug. 31, 1916—Oregon Yacht Club to Oak street.
Sept. 6, 1916—Swan Island to Port of Portland drydock.
Sept. 16, 1916—Alder street to Oak street.
Sept. 17, 1916—Ross Island to Oak street.
Sept. 17, 1916—Peninsula Lumber Co. to Port of Portland drydock.
Sept. 26, 1916—North Portland Mill to Port of Portland drydock.
Oct. 5, 1916—Taylor street to Standard Box Co. dock.
Oct. 6, 1916—Channel to Oak street.
Oct. 10, 1916—Portland Flour Mills to Swan Island.
Oct. 11, 1916—Albers dock to Swan Island.
Oct. 17, 1916—Portland Lumber Co. to Oak street.
Oct. 23, 1916—Albina Ferry to Port of Portland drydock.
Oct. 30, 1916—Swan Island to Port of Portland drydock.
Oct. 30, 1916—Peninsula Lumber Co. to Port of Portland drydock.
Nov. 2, 1916—Swan Island to Port of Portland drydock.
Nov. 8, 1916—Swan Island to Port of Portland drydock.
Nov. 9, 1916—Albina Ferry to Oak street.
Nov. 15, 1916—Swan Island to Port of Portland drydock.
Nov. 25, 1916—Swan Island to Port of Portland drydock.
Nov. 25, 1916—Clark & Wilson Mill to Shaver's boom.
Nov. 25, 1916—Ballast dock to Shaver's boom.

FIRE-BOAT CALLS ANSWERED BY PATROL BOAT DURING YEAR 1916

Dec. 30, 1916—Emerson Hardwood Company's Plant.
Jan. 30, 1916—Foot of Pendleton Avenue.
Jan. 28, 1916—Multnomah Box Company.
Feb. 2, 1916—Inman-Poulson Mill.
Feb. 13, 1916—Macadam and Lowell.
Feb. 17, 1916—Inman-Poulson Mill.
April 5, 1916—Alder street.
April 14, 1916—Washington street.
April 29, 1916—Ankeny street.
June 8, 1916—Foot of Everett street.
June 9, 1916—Foot of Taylor street.
June 14, 1916—Foot of Salmon street.
July 12, 1916—Irving dock.
July 20, 1916—Barber Asphalt Company.
July 22, 1916—Burke Fish Company.
July 22, 1916—Jones Mill.
July 26, 1916—Foot of Broadway.
July 29, 1916—Pacific Bridge Company.
Aug. 11, 1916—Willamette Iron & Steel Works.
Aug. 12, 1916—Foot of Taylor street.
Aug. 14, 1916—Foot of Russell street.
Aug. 15, 1916—Foot of Alder street.
Aug. 26, 1916—Albers dock.
Sept. 13, 1916—Standard Box Company dock.
Sept. 13, 1916—West Side Lumber Company.
Sept. 14, 1916—Multnomah Box & Lumber Company.
Nov. 7, 1916—Inman-Poulson Mill.
Dec. 14, 1916—Salmon street, 9:50 to 8 P. M.

VIOLATIONS OF GOVERNMENT REGULATIONS IN PORTLAND HARBOR DURING YEAR 1916

Dec. 10, 1915.	Nick Hack, of 550 Walnut street N., no light in a rowboat off the Portland Flouring Mills at 5:30 P. M.
Jan. 2, 1916.	Mack Houk, 695 Lovejoy street; power canoe off N. B. dock at 10 P. M., no staff light or rules and regulations.
Jan. 9, 1916.	Steamer America crossing race course, ordered to tie up to S. P. Dock.
Jan. 9, 1916.	Launch Marion with power on board, crossing race course, brought to quarters.
April 5, 1916.	7:20 P. M., R. J. Mundell, 721 East Ankeny street, in launch Zitz off Inman-Poulson Mill; no staff light, no fire extinguisher and no copies of the rules and regulations.
May 1, 1916.	J. B. Williams, 190 Knott street, in the launch Thelma, without any stern light.
May 2, 1916.	E. V. Coffin, of Milwaukie, in a canoe without any light.
May 2, 1916.	John Bleasing, launch Sister; no staff light.
July 4, 1916.	Harlan Ruckman and three others in a rowboat from Favorite boathouse at 10:45; no light.
Sept. 11, 1916.	Clarence Mack, East 46th and Oak streets; no light in canoe off Ross Island at 9 P. M.
Sept. 11, 1916.	Man running a line from the Dredge Titanto, Pacific Bridge Co. dock at 9:20 P. M.; no light.
Sept. 13, 1916.	G. A. Robnett, 731 Gantenbein Avenue, launch Skipp; no staff light.
Sept. 19, 1916.	W. Masters; no staff light at 9:45 P. M.; off North Portland Mill.
Sept. 22, 1916.	Otto Weisman in a rowboat under Supples Dock at 8:40 P. M.; no light.

COASTWISE SHIPMENTS, YEAR 1916

FOREIGN		Value
Wheat	1,698,463 bushels	$ 1,962,964
Flour	85,903 barrels	387,145
Barley	673,851 bushels	551,783
Miscellaneous	859,586	424,883
Lumber	22,316,713 feet	235,667
Total		$3,562,442
DOMESTIC		
Wheat	1,553,376 bushels	$ 1,801,029
Flour	600,746 barrels	3,507,303
Barley	3,503 bushels	2,360
Lumber	107,630,000 feet	1,323,245
Total		$6,633,937

TONNAGE IN FOREIGN TRADE—FISCAL YEAR 1915-16

	ENTERING		CLEARING	
	Number Vessels	Net Tonnage	Number Vessels	Net Tonnage
Foreign—steam	33	94,792	35	95,205
Foreign—sail	41	77,729	41	77,732
Foreign—total	74	172,521	76	172,937
American—steam	2	2,022	20	28,744
American—sail	19	15,172	25	19,241
American—total	21	17,194	45	47,985
Total—foreign trade	95	189,715	121	220,922
Coastwise—steam	1036	1,395,560	1008	1,337,998
Coastwise—sail	30	41,597	24	47,945
Coastwise—total	1066	1,437,157	1032	1,385,943
Total, all classes	1161	1,626,872	1153	1,606,865
CALENDAR YEAR 1916				
Foreign—steam	23	63,364	24	61,382
Foreign—sail	14	27,936	22	43,218
Foreign—total	37	91,300	46	104,600
American—steam	1	1,451	11	9,438
American—sail	17	11,059	26	19,403
American—total	18	12,510	37	28,841
Total—foreign trade	55	103,810	83	133,441
Coastwise—steam	956	1,207,669	945	1,207,965
Coastwise—sail	51	64,458	40	61,382
Coastwise—total	1007	1,272,127	985	1,269,347
Total, all classes	1062	1,375,937	1078	1,402,788

DOMESTIC RECEIPTS AND SHIPMENTS AT PORTLAND BY WATER—FISCAL YEAR 1915-16

Domestic Shipments	Tons	Value
To Coast Ports	459,914	$ 17,336,581
To Alaska	3,037	123,928
To Hawaii	3,211	74,268
To Atlantic Ports	11,336	1,014,858
Total	477,498	$ 18,549,635
Domestic Receipts		
From Coast Ports	952,927	23,199,133
From Alaska	2,301	477,791
From Atlantic Ports	27,782	3,597,416
Total	983,010	$ 27,274,340
CALENDAR YEAR 1916		
Domestic Shipments		
To Coast Ports	379,866	$ 18,024,743
To Alaska	12,922	179,100
To Hawaii	748	33,558
Total	393,536	$ 18,237,401
Domestic Receipts		
From Coast Ports	1,015,613	20,123,223
Form Alaska	2,375	452,492
Form Atlantic Ports	5,326	674,463
Total	1,023,114	$ 21,250,178

IMPORTS, BY COUNTRIES, FOR FISCAL YEAR ENDING JUNE 30, 1916

Australia	$ 73,816.00	Italy	$ 7,114.00
Austria-Hungary	100.00	Japan	392,117.00
Brazil	65,950.00	Netherlands	14,447.00
Canada	111,089.00	New Zealand	4,251.00
China	71,842.00	Norway	10,396.00
Cuba	6,053.00	Panama	215.00
Denmark	1,142.00	Peru	617.00
France	13,955.00	Philippine Islands	122,617.00
Germany	1,101.00	Spain	1,232.00
Greece	4,995.00	Straits Settlements	13,725.00
Guatemala	13,291.00	Sweden	46,769.00
Hongkong	68,799.00	Switzerland	62.00
India	1,279.910.00	United Kingdom	103,191.00
Indies, other Br. East	384.00		
Indies, Dutch East	9.959.00	Total	$2,439,139.00

PRINCIPAL IMPORTS, BY COMMODITIES, FOR FISCAL YEAR ENDING JUNE 30, 1916.

	Quantity	Value
Bags, Jute, pounds	6,869,892	$650,269.00
Burlap, pounds	7,459,885	574,318.00
Chemicals	.....	6,324.00
Coal, tons	2,422	9,912.00
Coffee, pounds	762,850	31,626.00
Corn (Manchurian), bushels	9,232	6,930.00
Cotton, Mfs.	.....	17,452.00
Earthenware	.....	31,075.00
Copra, pounds	1,055,505	58,962.00
Cotton waste, pounds	264,986	25,545.00
Fiber, unmanufactured, tons	771	128,692.00
Fiber, Mfs.	.....	43,304.00
Hides and pelts, pounds	72,909	13,636.00
Household goods	.....	32,033.00
Oil cake, pounds	780,662	10,284.00
Oil, Olive, gallons	5,565	8,594.00
Oils, other	.....	2,655.00
Plants and Bulbs	.....	18,416.00
Rice, pounds	2,277,478	61,821.00
Seeds, pounds	4,107,736	105,821.00
Silk, Mfs.	.....	41,500.00
Spices, pounds	65,356	5,844.00
Sulphur, tons	3,595	62,856.00
Tallow, pounds	107,050	7,657.00
Tea, pounds	353,957	71,459.00
Tin in bars, pounds	31,365	10,704.00
Tobacco and Mfs., pounds	8,864	9,799.00
Toys	.....	3,260.00
Hardwood, feet	2,924,000	93,173.00
Wood, Mfs.	.....	9,727.00
Wood, Mfs.	.....	6,605.00

And smaller quantities of fruits, paints, leather, metal and other commodities, to make up total imports for fiscal year, $2,439,139.

EXPORTS, BY COUNTRIES, FOR FISCAL YEAR ENDING JUNE 30, 1916

Africa, British South	$ 276,160.00
Australia	1,438.362.00
Canada	312.00
Chile	890,007.00
China	336,594.00
France	216,460.00
India	8,200.00
Italy	205,195.00
Japan	1,500.00
Mexico	33,984.00
Panama	626,440.00
Peru	195,749.00
United Kingdom	6,425,528.00
Total	$10,654,491.00

PRINCIPAL EXPORTS, BY COMMODITIES, FISCAL YEAR ENDING JUNE 30, 1916

Barley	1,847,307 bushels	$1,398,242
Oats	80,501 bushels	39,000
Wheat	6,841,646 bushels	7,296,030
Wheat flour	263,195 barrels	1,199,136
Copper, refined	212,036 pounds	55,470
Salmon, canned	657,121 pounds	60,257
Glue	21,808 pounds	2,274
Iron and steel, manufacturers'		63,617
Lead, pigs, bars, etc	200,103 pounds	14,787
Paper, printing	7,994,515 pounds	148,000
Logs	5,032,000 feet	50,708
Lumber	58,705,000 feet	583,765

And smaller quantities of other commodities to make up total exports for fiscal year $10.-654,491.

ANNUAL REPORT

OF

THE CIVIL SERVICE BOARD

FOR THE FISCAL YEAR ENDING
NOVEMBER 30, 1916

CIVIL SERVICE BOARD

To the Honorable Mayor and Commissioners of the City of Portland.

Gentlemen: The Civil Service Board herewith submits its report for the fiscal year 1916.

Under the following heads is presented a synopsis of the year's work, together with recommendations of the Board as to future action:

PERSONNEL OF THE BOARD

During the year the following changes in the personnel of the Board have been made:

On September 30, 1916, Mr. George W. Caldwell, president of the Board, was removed by Your Honor, and on October 10, 1916, Mr. George C. Mason was appointed by the Council to fill Mr. Caldwell's unexpired term. On the reorganization of the Board made necessary by these changes, on October 12, 1916, Mr. John F. Logan, senior Commissioner, was unanimously selected by the Board as president.

It has been the endeavor of the Board to maintain the highest possible standard in examinations.

It has been especially fortunate in securing the aid of competent authority where scopes of a technical nature were required.

In the examinations held by the Board during the past year, special effort has been made to ascertain, by tests, the mental attitude of the applicant. It has also been the aim of the Board in every instance where feasible to make a practical test a part of the examination.

Special attention has also been given to physical tests, and, where necessary, to age limits on entrance examinations. These tests in addition to the written tests, which have also received careful consideration, have, we believe, enabled us to submit far better eligible lists to the appointing authorities as the result of these mental, moral, technical, physical and practical tests. We believe that the eligibles on the present lists are of a higher standard than ever before, and when appointed to permanent positions will give the City efficient service.

PUBLIC CO-OPERATION

We wish to acknowledge, with sincere appreciation, the courtesy shown this Board by many of our public-spirited citizens in response to requests to mark examination papers. They are entitled to the public thanks of the Board for the arduous duties impartially performed and for the ready co-operation in response to inquiries relative to character, habits and capacity of candidates.

RULES

The Board has carefully revised its rules, and under date of May 1, 1916, published and formally adopted same.

The Board recognized the same responsibility in respect to any delinquency on the part of a laid-off employ as it had in respect to an eligible on an original list and has adopted rules covering this point. Also that it should not for economic reasons carry a laid-off man in-

definitely on an eligible list. The Board has provided a definite plan for promotion examinations and for the protection of an eligible who has received a promotion appointment, but only during the period of his probation, after which time he must rely upon his own merit. While transfers are authorized by the Charter, it is not considered that it is for the best interests of the service that transfers should be made except in case of extreme necessity. The Board takes the same view in regard to reinstatements and holds that no reinstatements should be made of applicants who have been separated from the service for a longer period than eighteen months. Particular attention has been paid to the re-entry into the service of either a laid-off employe or one who has been granted a leave of absence who must, if their original examination required a physical test, submit to a satisfactory re-examination before again entering the service. It is particularly urged that the fourth paragraph of Rule VII regarding the reporting of temporary appointments to the Board within twenty-four hours be promptly complied with, as the Board must at once be advised of such action. It is the opinion of the Board that the present rules have been brought down to date and are broad enough to cover any condition which may arise in the near future.

CREATION OF OFFICES BY THE COUNCIL

The matter of creation of new offices by the Council has been taken up by the Board with both the City Attorney's office and the Commissioners. It is very important from every standpoint that when a new office is created by the Council that the duties of such office be plainly and specifically defined. Ordinances creating positions in this manner furnish conclusive evidence of the purpose of the employment, and are not only a guide for action by the Council, but also gives the Civil Service Board the necessary information for proper classification. The Charter provides for the creation of an office by the Council and by indirection infers that it should be so created that it may be rightly classified by the Board. It is suggested, therefore, that in the future the Council pass ordinances creating new offices in which the duties pertaining thereto are definitely and fully outlined.

SALARIES

The Board is in receipt of frequent communications from other cities whose Civil Service Commissions are carefully studying the question of salary standardization. The results of some of these investigations have been received and are on file.

While it is the perogative of the Council to provide salaries, and it is not within the scope of the duties of this Board, yet it is a question of vital importance; therefore, attention is called to the matter that some action may be taken by the Council to secure a uniform schedule of salaries.

Respectfully submitted,

H. W. MacLEAN,

Sec'y. Civil Service Board.

LEGAL MATTERS

The following cases are, or have been, before the Courts during the past year. Those which have been disposed of have been in favor of the City and in accordance with the rulings of the Board on the questions at issue:

Jesse E. Pelton v. Will H. Daly—Mandamus to compel certification of name for position of engineer at Incinerator. Decided in favor of City.

Ben. B. Thomas v. Will H. Daly—Mandamus to compel certification of name for position of engineer at Incinerator. Decided in favor of City.

J. W. Dryden v. Will H. Daly—Mandamus to compel reinstatement and payment of salary for time laid off. Appealed to Supreme Court.

Clarence E. Butts v. City of Portland—Action to recover salary on account of alleged improper lay-off. Decided in favor of City.

J. J. Moll, et al., v. City of Portland—Mandamus to compel reinstatement on eligible list. Decided in favor of City.

Chas. E. Christensen v. City of Portland—To compel defendant to place petitioner's name on eligible list and to recover salary. Action pending.

M. E. Crowe v. H. R. Albee—Mandamus to compel reinstatement of plaintiff and payment of salary. Action pending in Supreme Court.

J. N. Jepson, et al., v. City of Portland—Suit to recover salary for time of suspension in Fire Bureau. Action pending.

NUMBER OF EMPLOYES UNDER CLASSIFIED CIVIL SERVICE

DEPARTMENT OF PUBLIC SAFETY

Mayor's Office

Stenographic Clerk	1
Chauffeur	1

Police Bureau

Captain of Police	4
Lieutenant of Police	2
Detective Sergeant	15
Detectives	23
Sergeant of Police	6
Patrolman, Driver, Jailor, Guard	217
Harbor Master	1
Matrons	3
Superintendent Women's Protective Division	1
Assistant Superintendent Women's Protective Division	2
Stenographic Clerks	2
Harbor Master	1
Engineer—Harbor Patrol	3
Municipal Grappler	1
Chauffeur	1
Elevatorman	3
Engineer City Jail	3
Janitor	3
Total	292

Bureau of Fire

Chief Engineer	1
Assistant Chief	1
Battalion Chief and Fire Marshall	1
Battalion Chief	2
Captains	36
Lieutenants	45
Master Mechanic	3
Engineers	21
Hosemen, Truckmen, Drivers	249
Master and Pilot Fire Boat	4
Engineers, Fire Boat	6
Stokers	25
Clerks	3
Stenographic Clerk	1
Superinendent Fire Alarm and Police Telegraph	1
Fire Alarm Telegraph Operators	10
Linemen	4
Blacksmith	1
Electrical Instrument Maker	1
Inspector Fire Escapes	1
Plumber	1
Total	417

Municipal Court

Chief Clerk	1
Clerk	1
Total	2

DEPARTMENT OF PUBLIC UTILITIES

Commissioner's Office

Chief Clerk	1
Private Secretary	1
Stenographer	1
Motor Bus Inspector	1
Total	4

Bureau of Water Works

Superitendent	1
Engineer	1
Assistant Engineer	1
Material Inspector	1
Clerks	32
Stenographers	2
Computer	1
Inspectors	25
Pump Engineers	10
Gatemen	10
Auto Truck Drivers	11
Inspectors of Pipe Lines	2
Instrument Man	1
Chainmen	4
Draftsmen	5
Chauffeur	2
Carpenters	1
Foremen	6
Assistant Foremen	8
Service Mechanics	12
Service Men	10
Utility Men	10
Laborers	90
Total	246

Street Cleaning Bureau

Superintendent	1
Clerk	1
Stenographer	1
Chauffeur	3
Blacksmith	1
Hostler	10
Broom Makers	2
Repair Men	3
District Superintendent	3
Laborers	173
Total	198

Incinerator

General Foreman	1
Assistant Foreman	1
Chief Engineer	1
Weighman	1
Firemen	7
Watchman	1
Laborer	7
Total	19

DEPARTMENT OF PUBLIC AFFAIRS

Commissioner's Office

Chief Clerk	1
Stenographer	1
Total	2

City Attorney's Office

Law stenographer	4

City Hall

Superintendent	1
Plant Engineer	1
Elevatorman	1
Janitors	7
Telephone Operators	2
Messenger	1
Total	13

Weights and Measures

Sealer of Weights and Measures	1
Deputy	1
Total	2

Public Employment Bureau

Clerk	1

Parks

Superintendent	1
Clerks	2
Civil Engineer	1
Junior Engineer	1
Custodian Forestry Building	1
Animal Keeper	1
Playground Directors	32
Senior Playground Directors	5
Swimming Directors	5
Attendants Comfort Stations	12
Arboriculturist	1
Gardeners	6
Park Keepers and Assistants	10
Park Helpers	60
Total	138

AUDITOR'S DEPARTMENT

Auditor	1
Chief Deputy	1
Deputies	13
Clerks	8
Stenographers	5
Total	28

DEPARTMENT OF FINANCE

Commissioner's Office

Private Secretary	1

Treasurer's Office

Cashier	1
Clerks	7
Stenographers	3
Typist	1
Total	12

License Inspector

Inspector	1

Market Master

Market Master	1
Assistant Market Master	1
Total	2

Purchasing Bureau

Chief Clerk	1
Material Inspector	1
Stationery Clerk	1
Bill Clerk	1
Messenger	1

Municipal Shops

Shop Clerk	1
Auto Mechanics	7
Blacksmith Helper	1
Horseshoer	1
Auto Painter	1
Total	11

Municipal Garage

Laborer	1

DEPARTMENT PUBLIC WORKS

Commissioner's Office

Private Secretary	1
Clerk	1
Chauffeur	1
Stenographer	2
Messenger	1
Total	6

Main Office

Chief Clerk	1
Clerks	7
Plan Clerk	1
Desk Clerk	1
Total	10

Bureau of Standards

Chemist	1
Cement Tester	1
Blue Printer	2
Asphalt Plant Inspector	1
Total	5

Bureau of Buildings

Chief of Bureau	1
Plan Examiner	1
Structural Engineer	1
Building Inspectors	6
Electrical Inspectors	6
Plumbing Inspectors	4
Stenographers	3
Total	22

City Engineer's Office

Civil Engineer	1
Structural Assistant	1
Total	2

Bureau of Surveys

Chief of Bureau	1
Municipal Engineer	1
Draftsmen	10
Computers	6
Clerks	2
Instrumentmen	17
Chainmen	34
Total	71

Bureau of Sewers

Chief of Bureau	1
Municipal Engineer	1
Sewer Engineers	2
Draftsmen	2
Computer	1
Instrumentman	1
Chainmen	2
Inspectors, Streets and Sewers	15
Auto Truck Driver	1
Assistant Foremen	2
Laborers	19
Total	47

Bureau of Highways and Bridges

Chief of Bureau	1
Civil Engineers	3
Highway and Bridge Engineer	1
Structural Assistant	1
Computer	1
Superintendent Sidewalk Repairs	2
Sidewalk Inspectors	43
Foreman Bridge Carpenter	1
Bridge Carpenters	5
Auto Painters	1
Stone and Wood Block Pavers	1
Traction Engineers	4
Cement Finisher	1
Foreman Sidewalk Repairs	1
Foreman Laborers	4
Laborers	18
Cement Workers	3
Total	91

LIST OF EXAMINATIONS HELD

Date	Title	Applications	Participants	Passed	Rejected
12/7/15	Auto painter	9	7	4	3
12/14/15	Auto truck driver	81	75	62	13
12/21/15	Deputy Pound Master	15	9	6	3
1/11/16	Chief Clerk	24	20	8	12
1/18/16	Structural Assistant	13	13	8	5
1/25/16	Park Draftsman	4	4	3	1
2/ 1/16	Janitor and Elevatorman	31	29	7	22
2/ 8/16	Topographical Draftsman	9	9	4	5
2/29/16	Foreman and Assistant, Water Bureau (promotion)	24	25	20	5
3/14/16	Hoseman, Truckman and Driver, Fire Bureau	117	111	84	27
4/11/16	Playground Director	43	41	28	13
5/16/16	Auto Mechanic	8	8	7	1
4/18/16	Utilityman (Promotion)	35	28	22	6
5/23/16	Engineer, Harbor Patrol	4	4	3	1
6/ 1/16	Chief Clerk, Bureau (Promotion)	8	6	6	0
6/ 6/16	Swimming Director	11	9	4	5
6/27/16	Clerk	33	36	11	25
7/18/16	Dock Watchman	44	43	28	15
7/20/16	Master and Pilot	9	12	9	3
7/25/16	F. Eng. Engineer (Promotion)	13	13	9	4
8/ 1/16	Assistant Engineer (Stoker)	18	16	13	3
9/12/16	Junior Engineer	3	2	2	0
9/19/16	Arborculturist and Assistant	8	7	3	4
9/21/16	Park Keeper and Asst. Park Keeper (Promotion)	34	29	19	10
9/26/16	Park Helper	40	38	20	18
10/ 3/16	Asst. W. P. Division	8	8	2	6
10/17/16	Messenger and Office Boy	3	3	3	0
10/19/16	Auto Mechanic	7	5	1	4
10/24/16	Typewriter Copyist	5	5	4	1
10/24/16	Stenographer	15	15	12	3
10/31/16	Cement Workers	9	9	9	0
11/ 2/16	Cement Finishers	11	11	9	2
11/21/16	Blue Printer	3	2	2	0
		709	652	432	220

SUMMARY OF WORK OF CIVIL SERVICE BUREAU

Total registrations	1,880
Total number applications filed	709
Appointments in classified service	96
Discharged for cause	43
Resigned	57
Former employes reinstated	5
Total examinations held, 33; Promotion, 5; Regular, 28	33
Total number persons examined during 1916 (to Nov. 31)	652
Number of employes in the classified service	1,655
Hearings on appeal from order of discharge	11
Discharges sustained	7
Discharges not sustained	4
Leave of absence granted	64

FINANCIAL

Personal Service	$3,443.05
Supplies	244.97
Equipment	2.00
Contingencies	44.53
Fixed Charges	24.90
Total	$3,759.45

1916

Cost of Registration per capita	$ 1.99
Cost of Examination per capita	5.30
Filed for Examination	709
Registered	1880
Expenditures, 1914	$4,415.64
Expenditures, 1915	4,201.36
Expenditures, 1916	3,759.45

MUNICIPAL CIVIL SERVICE BUREAU,
By H. W. MacLean, Secretary.

ANNUAL REPORT

OF

THE DEPARTMENT OF PUBLIC WORKS

FOR THE FISCAL YEAR ENDING
NOVEMBER 30, 1916

DEPARTMENT OF PUBLIC WORKS

ROBERT G. DIECK
COMMISSIONER

MAIN OFFICE—
C. J. KRUSE, Chief Clerk

BUREAU OF STANDARDS—
R. S. DULIN, Chief.

BUREAU OF BUILDINGS—
H. E. PLUMMER, Chief

Building Division—
A. S. LOTSPEICH, Chief Inspector

Electrical Division—
E. F. DUNLAP, Chief Inspector

Plumbing Division—
WM. HEY, Chief Inspector

CITY ENGINEER—
P. H. DATER

Bureau of Highways and Bridges—
R. E. KREMERS

Pavement Construction and Maintenance Division—
J. HANNAM
C. W. WANZER } District Engineers

Structural Division—
R. B. WRIGHT, Chief Inspector

Bridge Maintenance Division—
NELS REED, Superintendent

Sidewalk Division—
R. F. HURLBURT, Superintendent

Bureau of Sewers—
J. C. SHARP, Chief

Construction Division—
C. A. ROBINSON, Superintendent

Bureau of Surveys and Drafting—
W. P. HARDESTY, Chief

Drafting and Computing Division—
O. A. KRATZ, Chief Draftsman

Survey Division—
I. C. ANDERSON
J. J. BROOKS
A. F. MORRIS
H. G. RICHARDSON } District Surveyors

Street Extension Division—
C. F. FISHER

MAIN OFFICE

RECORDS DIVISION

The work of re-indexing plans and correspondence has been prosecuted as rapidly as current matters permitted, and reasonable progress was made in the year. The reduced appropriation for 1917 will, in all probability, prevent the prosecution of this much-needed work, thus continuing a long-existing confusion in the records. The many reassignments of office space for the division have been the direct cause of the present unsatisfactory conditions, and only a determined and continued effort may improve a defect which has been most annoying and wasteful of time.

The volume of correspondence handled in the year was appreciably less than in the two years immediately preceding, coming directly from the reduction in the amount of improvements and a decided lessening of complaints. The comparison follows:

Year	In (Pieces)	Out (Pieces)	Total (Pieces)
1914	6,863	7,386	14,249
1915	6,188	8,231	14,419
1916	5,209	6,827	12,036

The division sold to the public 401 blue prints and other photographic copies of official papers, of a value of $132.30, at the average rate of 33 cents per copy.

PERMIT DIVISION

The issuance of permits through a single office has resulted in a quicker transaction of business and has practically removed all the former irritating delays to the public which were a constant and just cause for caustic complaint. Whereas formerly it was required that several disconnected offices be visited and much time lost in the process, a complete permit for construction may be had at one counter, where fees may be received and receipts given, so that the time now taken does not exceed one-third of that formerly required.

A summary of permits issued and fees collected during 1916 follows:

Kind	No. Permits	Valuation	Fees
Building	4,506	$ 6,335,590	$ 6,321.50
Electrical	6,251	547,820	4,680.15
Plumbing, (since April)	2,203	295,955	1,946.25
Billboards	31	7,375	15.50
Street space	1,463		
Sidewalks	581		1,141.75
Driveways	82		41.00
Sidewalks, (no fees)	98		
Private Grading	3		6.50
Total	15,218	$ 7,186,740	$ 14,152.65

SUMMARY OF SIDEWALK PERMITS

	Lineal Feet Sidewalk	Lineal Feet Curb	Driveways	Fees
East Side	58,871	36,710	82	$ 1,182.75
West Side	1,094	644		
(Issued to City Engineer).				
East Side	12,084	9,225		
West Side	440	327		
Grading, private				6.50
Total	67,489	46,906	82	$ 1,189.25

PERMITS ISSUED TO EXCAVATE STREETS

Kind of Pavement	Water and Sewer	Sewer	Water	Gas New-Rep.	Gas Tank	Steam and Electric	Number
Hard surface	44	126	142	221	31	73	637
Earth, etc	198	523	297		9	3	1,030
Total	242	649	439	221	40	76	1,667

House numbers issued 447

The prompt transfers of house numbers to the new plans and the rectification of known defects in the numbering scheme have not been possible because of reduced force and the increased general work following the annexation of St. Johns and Linnton. The confusion in numbering of these recently-annexed areas has been brought to attention constantly by the postal authorities, but the necessity for extensive corrections, though fully appreciated, has been considered of less immediate importance than the need of satisfactorily recording current business. There is no question but that the numbering scheme for the city should be revised, but the work is of such magnitude that unless a definite and adequate appropriation be made for the purpose it should not be attempted. To be of highest value, the work should be promptly completed and the change placed in effect rapidly.

ACCOUNTING DIVISION

The accounts of the department have been maintained in good form and the methods employed have met the approval of the expert accountants who made the last audits. These methods have been practically adopted in other departments of the City to good satisfaction. Complete control of the accounting has not always been possible, but such defects as have developed are chargeable to imperfect understanding of the system, or to the confusion arising from the large volume of emergency work, where strict obedience to proscribed procedure is sometimes impracticable.

A grave defect in administration is the lack of a sufficient system for the control of the public property after purchase. The loose methods of issuance and supervision of this property undoubtedly encourages a tendency toward indifference. In addition, there being no segregation of public property into groups of permanent and impermanent character, carelessness in use and preservation is quite to be expected. The maintenance of a continuing property ledger is a small attempt at regulation, and to be of general value such a ledger should be supplemented by a rigid system of property accounting whereby the identity

of public property might not be lost, even with frequent transfers. The accounting system in use by the several departments of the national government, with modifications and adjustments to meet local needs, affords a ready means to overcome the difficulty. It is comparatively simple to regulate purchases through charter provisions and strict auditing of bills, but the work of conserving public property is less than half done if no further checks be imposed. I urge most strongly the complete supervision of the whole matter of protecting public property, under a general system of property accounting, with full responsibility of the accounting officers for the damage and destruction of the same.

BUREAU OF STANDARDS.

No change was made in the organization of this bureau during the year, and its operations in the matter of testing materials and in modernization of specifications were continued as in former years. The field of endeavor was, however, made more general as the public came to know the service held out, as is shown in an extensive series of tests upon rope, and other tests on materials of lesser importance. It is expected that with the development of the ship-building industry there will come a decided increase in requests for physical tests on steel and other construction materials used in ship-building, which the bureau is equipped to undertake. The great majority of tests undertaken has, however, been concerned with the examination of materials used in public construction, and particularly of cements and pavement ingredients. It is to be hoped that within a short time all purchases of materials for the City will be subject to physical and chemical tests, and that the practice of purchasing by name or brand will be entirely discontinued.

Tests were made by the bureau as follows:

FIRST CHEMICAL

Classification	No. of Samples
Cement in Concrete	10
Gasoline	22
Paint	6
Creosote Oil	2
Cresylic Acid	1
Lubricating Oils	24
Hydrated Lime	1
Distillate	3
Coal	2
Fuel Oil	3
Kerosene	1
Miscellaneous	5
	80

BITUMINOUS MIXTURES

Classification	No. of Samples
Bituminous Top Mixtures	204
Bituminous Base Mixtures	26
Asphaltic Concrete Mixtures	16
Binder Mixtures	5
Patching Mixtures	14
Special Mixtures	9
Asphaltic Concrete Cuts	3
Sheet Asphalt Cuts	5
Bituminous Top Cuts	34
Bituminous Base Cuts	3
Sand (Screen Tests)	5
Specific Gravity of Asphaltum	6
Tests on Asphaltum	118
Tests on Asphaltic Cement	127
Total	575

SECOND PHYSICAL

Classification	No. of Tests
Building Tile	12
Building Brick	9
Cement, Portland	208
Concrete, Blocks, Cubes and Cylinders	312
Chains	1
Crushed Rock	6
Cast Iron	6
Douglas Fir	6
Gravel	1
Hassam Pavement	1
Nails, Tension	9
Oak, Eastern and Oregon	12
Pavements, Sections	44
Pavement, Aggregates	102
Rope	378
Sand	8

The construction of viaducts for grade elimination, to commence in the early summer, will afford fine opportunity for the collection of much valuable data on the strength of mass concrete manufactured under known field conditions, and an elaborate series of tests of this kind is planned during the active construction work.

There has been some complaint of inferior quality of liquid fuel offered in the open market, and discussion of this has proceeded to the point of drafting legislation prescribing definite standards of quality. The wording of the general statutes of Oregon seemed, however, to render control of such sales much open to doubt, and the draft of ordinance proposed was temporarily laid aside. It would appear, though, that a decided advance toward standardization of liquid fuel might be made by requiring that every vendor serving the public through a street filling station should agree to supply liquid fuels meeting standard requirements as a prerequisite to the grant of permit. This inspection would work not as a hinderance to business, but as a positive advertisement, as the public would then be assured of the quality of fuels offered. With an advance in price of liquid fuels, there will be great temptation for vendors to adulterate, and it seems the duty of the City to prevent imposition on the public, at least in this simple manner.

The extension of the work in the laboratory to the standardization of all sorts of supplies, including foods, drink and medicines, is a hope of the future. There appears no valid reason why the laboratory should not give added service to the citizens in practical ways, and generally to raise our local market standards. It will, of course, require a campaign of education to fix this idea in the public mind, but successes in similar ventures in other cities should certainly indicate the feasibility of such a departure in our municipal administration. The charge of paternalism would fall as soon as the economy and value of such inspection was appreciated.

The lessened demand for public improvements reduced the volume of work in the Photographic Division, although the work on the regrade projects overcame in part the reduced business from other sources. The rectigraph apparatus gave good service and helped to reduce materially the drafting expenses. The purchase of this machine has been thoroughly justified and has facilitated all construction operations.

PRODUCTION

	Blue Paper		White Paper		Blue Cloth		WhiteC loth		Negatives		Average Value	Average size Sq. Ft.	Recti-graph Prints	Photos	
	No.	Sq.Ft.	No.	Sq.Ft	No.	Sq.Ft	No.	Sq.Ft	No.	Sq.Ft				Plates	Prints
Department of Public Works	4333	14006	2987	4828	140	948	206	1255	278	967	.....	.....	1489	285	1294
Department of Public Utilities	814	1299	397	1451	.....	.....	38	236	30	143	.....	.....	557	21	78
Department of Public Safety	3	12	.....	.....	.....	.....	.....	.....	2	40	.....	.....	.....	11	20
Department of Public Affairs	410	1561	10	39	.....	.....	.....	.....	.....	.....	.....	.....	234	36	21
Auditor	23	121	13	88	.....	.....	1	5	.....	.....	.....	.....	2	.....	.....
Multnomah County	1520	6840	102	466	.....	.....	2	25	12	53	.....	.....	.....	.....	8
O.-W. R. & N. Regrade	690	3073	221	382	94	495	74	130	27	41	.....	.....	182	55	4847
Miscellaneous	193	455	3	42	.....	.....	1	2	1	14	.....	.....	194	23	606
Total	7986	27367	3733	7296	234	1443	322	1653	350	1258	$0.109	3.09	2658	431	6884

BUREAU OF BUILDINGS

GENERAL OBSERVATION

The legislation affecting the activities of the bureau has been brought up to a high standard, with the exception of the ordinances regulating signs, and the Building Code, which is in process of revision. It is expected that the proposed revision of the Building Code will be ready for submission to the Council early in 1917. This work has been under way for some time, but in view of the fact that the Building Code is an important factor of the development of the City, the Building Code Revision Committee is to be commended for the thought and deliberation which they are applying to this large task.

The Council passed a new Plumbing Code, and this has been in effect since April 1. The effects of this code have been distinctly beneficial. The Code is modern in its regulations, and the Plumbing Division is now operating on a basis which is more satisfactory than has existed for many years.

The Electrical Code was amended during the year to include the general regulations of the 1915 edition of the National Electrical Code, together with some desirable changes in connection with regulations, local in character. The amended Electrical Code took effect June 2d, and the changes made have been found to be beneficial. During the year the Housing Code has been under consideration, but owing to more pressing business in the department, little work has been done towards completing the final draft.

Some slight modifications in the regulations governing Automatic Elevators were found desirable during the year, owing to the financial condition of the proprietors of a number of apartment houses. These modifications will give relief temporarily, and a full compliance with the regulations is expected in the near future, with an improvement of business conditions. The condition of the Automatic Elevators of the City is distinctly better now than at any previous time, and by the first of the year 1918, it is expected that all Automatic Elevators will be in most excellent working condition. As an example of the improvement in the condition relative to the Automatic Elevators, it will be interesting to note that during the year, no serious accidents have been reported.

During the year, the conditions in the City relative to the smoke nuisance, have shown signs of improvement, and, except for the offenses of one company, the conditions could be said to be materially better. The offenses of this aforementioned company were not willful, and arrangements have been made by this company to overcome the difficulties which previously caused the emission of smoke. The passage of an ordinance regulating the emission of smoke, is without doubt, desirable, not becouse of any severe penalties that might be invoked, but because it will set a standard of conduct for the citizens of this community.

There has been no attempt during the year to extend the activities of the Bureau, either in connection with the regular work or in new fields of activity. This has been occasioned by the reduction in force, following a reduced budget appropriation for the year, and the efforts

of the Bureau have been directed solely towards carrying on the work, as far as possible, as previously conducted, with no reduction of efficiency.

The Bureau has, throughout the year, endeavored to arrange for a reduction in the time and trouble required in the taking out of building, electric, and other permits. The experiment was tried of allowing the registered electrical contractors to obtain permits by mail, and was considered so successful that the practice was continued, and has now become quite well established. The same privilege will be extended to cover other permits, if found to be practicable. This method of taking out permits has been somewhat easily brought into use, because the electrical contractors are quite familiar with filling out applications and calculating the fees for permits, and because practically all the electrical work has been done by registered electrical contractors. On the other hand, its introduction in connection with building and plumbing permits, would not be so easy, because the persons taking out such permits are not so familiar with the process of taking out a permit, and, in many instances, are unable, unassisted, to properly fill out an application and furnish the information necessary to obtain a permit.

BUILDING ACTIVITIES

There has been a slight reduction in the number and an encouraging increase in the valuation of building permits for 1916, over those for 1915. This is evidenced by the totals for 1916 of 4,506 permits issued, for a valuation of $6,335,590, while the totals for 1915 were 4,633 permits issued, for a valuation of $6,210,255. If the calendar year were taken as the basis of comparison, 1916 would show a big increase over 1915 in valuation. The reason for 1915 comparing so nearly to 1916 in valuation of permits, on the fiscal year basis, is because in December of 1914 a permit was issued for the Meier & Frank building, at a valuation in excess of $1,000,000. This ran the valuations for the fiscal year up considerably higher than those for the calendar year. There is no doubt, however, but that there has been an improvement in general building and business conditions, particularly during the latter half of the year. Among the large buildings undertaken or finished during the year, might be mentioned the First National Bank building, the United States National Bank building, the Auditorium, the United States Post-Office, the Huth building, several buildings of the Franklin High School, several buildings for the Benson Polytechnic School, the Home of the Good Shepherd, the Woman's Union, the White Shield building, besides a number of buildings for automobile houses and a number of apartment houses. In addition to the foregoing, the shipbuilding industry has been responsible for the construction of a considerable number of large frame buildings, used either for shops, or for the shelter of vessels during construction.

In residence construction, there has been a reduction, as compared to 1915, not only in the number—from 900 to 491—but also in the valuation, from $2,170,720 to $1,377,375. It is of considerable interest to note that the above reduction has taken place in the cheaper class of residences, and in the better class of residences there has been practically no reduction. For residences costing $3,000 and over, the number in 1915 was 191, as compared to 184 for the year 1916, and the valuation of the same for 1915 was $928,250, as compared to $859,350 for 1916. The residences that have been constructed during the year

have been almost entirely constructed as homes for individuals, and not to be sold as a matter of speculation.

In the construction of apartment houses, there has been an increase in activity over 1915. This is indicated by 11 permits issued during 1916, for a valuation of $445,000, as compared to 5 permits during 1915 for a valuation of $192,000.

The number of fire-proof, steel-frame buildings constructed during 1916 shows an increase in number and in valuation, as compared to the year 1915, as there were five buildings costing $1,670,000 for 1916, as compared to four buildings, costing $1,559,500, for 1915. On the other hand, the number of reinforced concrete buildings shows a considerable decrease in number, but an increase in valuation, there being ten buildings constructed, for a valuation of $464,300, for 1916, as compared to thirty buildings, for a valuation of $272,645, for 1915.

In mill constructed buildings, there is a very considerable decrease, the records showing that there were five buildings, for a valuation of $108,300, constructed in 1916, as compared to 22 buildings, for a valuation of $373,400, for 1915.

In ordinary construction buildings, the number for 1916 was exactly the same as for 1915, being 59; but the valuation for 1916 was considerably greater, being $840,575, as compared to $453,455 for 1915.

In frame building construction, there is a slight decrease in both number and valuation, as in 1916 the number was 1,719 and the valuation $2,179,430, while in 1915 the number was 1,967 and the valuation $2,580,560.

No definite forecast of the building development during the year 1917 can be made, but the general improvement of business conditions makes reasonably certain that there will be an increase in the number and valuation of buildings erected. It seems quite probable that there will be considerable activity during the year in the construction of manufacturing buildings. It seems only logical that Portland should expand in manufacturing lines, and there are numerous signs to show that this will be the case in the near future.

BUILDING DIVISION

The work of this Division has been conducted much as in 1915, no expansion of the work being possible, because of the curtailment of the working forces, due to the policy of rigid economy.

The average number of inspections per inspector, per day, has decreased slightly, being 17.7 in 1916, as compared to 18.7 in 1915. During the year no effort has been made to condemn dilapidated and decayed buildings within the fire limits, owing to the continuance of some unsatisfactory business conditions, which would make it a hardship to many owners, if they were required to tear down the dilapidated frame buildings owned by them. As soon as business conditions materially improve, however, this campaign will be undertaken again with vigor.

There has been a decrease during the year in the Municipal Court prosecutions, the number being 23 during 1916, as compared to 59 for 1915.

There has been a decrease in the number of complaints investigated, the number being 638 for 1916, as compared to 653 for 1915.

There has been a considerable increase in the number of sign inspections, the number for 1916 being 264, as compared to 46 for 1915.

The average value of building permits per day increased slightly, being $22,586 during 1916, as compared to $22,298 for 1915.

The reduction in the area of the inner fire limits was taken advantage of by two owners, who have constructed two buildings of ordinary masonry, Class VI. construction, in the area removed from the inner district. At the time this amendment was proposed, it was argued by the business interests that the passage of the amendment would afford great relief to a considerable number of property owners, and it is possible that this would have been true if business conditions had been nearer normal.

The Council during the year were not willing to support the Department of Public Works in enforcing the regulations relative to garages, and there is a considerable increase in number of buildings which are in use as public garages, which do not conform to the requirements of the Building Code. They are located as follows:

East Eleventh and Market Streets—One-story VII. class building.

331 Couch Street—Two-story brick building; Chinese mission second story.

309 Oak Street.

210 Broadway—Four-story VI. class hotel building.

99 North Broadway—Two-story frame building; rooms in second story.

445 Stark—Four-story VI. class hotel building.

335 Couch Street—Two-story VI. class building.

741 Alberta Street—One-story VI. class building with wood floor.

41 Union Avenue—Two-story VI. class building.

429 Belmont—One-story frame building.

East First and Morrison—Two-story VII. class building.

273 Third Street—Two-story VI. class building; rooms in second story.

12 Second Street, North—Three-story VI. class building; upper floors used as repair shop.

209 Front Street—Four-story VI. class building; upper floors used as repair shop.

351 First Street.

Southeast corner Broadway and Oak Streets—Three-story VI. class hotel.

Northwest corner Fifteenth and Alder Streets—Two-story VII. class building.

530 Alder—Two-story VII. class building.

533 Alder—Two-story VI. class building.

121 North Fifth Street—Two-story VI. class building.

Southwest corner Union avenue and Burnside—Three-story VI. class building.

Nineteenth and Washington—Small one-story VII. class building.

66 North Twenty-third—One-story VII. class building.

The case of the Meier & Frank building has not been settled. There are a number of deviations from the Building Code in this building.

The Coin Machine Company's building at East Seventeenth and Alice Streets is not in conformity with the Ordinance.

Both of the above mentioned buildings have been occupied for some time.

ELECTRICAL DIVISION

The work in the Electrical Division has been maintained on practically the same basis as in previous years. During the year it was necessary to employ an extra inspector, because of active construction in the electrical line. It is at times somewhat difficult for the Electrical Division to promptly take care of requests for inspection, and the employment of an extra inspector did not always afford complete relief.

There has been a decrease in the average number of inspections per inspector per day from 14.3 to 13. It is possible that the addition of Linnton and St. Johns to the City area has been responsible for a considerable part of this reduction, as both districts are a long way from the heart of the City, and transportation facilities are not good. There have been 69 cases of defective and dangerous wiring discovered during the year, as compared to 31 for 1915. Inasmuch as a considerable percentage of fires are caused from electrical sources, this percentage being estimated as amounting to from five per cent to twenty-five per cent, it is desirable for the Electrical Division to undertake an inspection of existing installations, for the purpose of eliminating any dangerous installations that may be found. This dangerous wiring is not confined entirely to the old buildings, for the reason that in newer buildings, after the building is completed, in accordance with the regulations, tenants will make changes in the wiring in such a way that the fire hazard is quite great. With the present force, it is not possible to undertake this work, but the importance of this work being undertaken by the City at the earliest possible moment, cannot be too strongly urged.

PLUMBING DIVISION

The Plumbing Division has been working under much improved conditions since the new Plumbing Code went into effect. While the Code, as a whole, has been found to be very satisfactory, yet there are a few sections which experience has shown to be in need of revision. The Plumbing Board of Appeal are investigating this matter, and will make recommendations.

In the work of inspection, an increase in efficiency is indicated, the average number of inspections per inspector per day increasing from 9.1 during 1915 to 9.6 during 1916. While this increase is not large, it is encouraging, in view of the extension of the area of the City to cover Linnton and St. Johns, which are hard to cover with the inspection service.

The sanitary conditions of the City generally can be said to be in excellent condition, due to the work of the Plumbing Division and the Board of Health.

CLERICAL DIVISION

During the year there has been no material change in the Clerical Division. It has been the purpose of the Department of Public Works to reduce the time taken to issue permits, to a minimum, and further progress in this direction has been made. The efficiency of the Clerical Division is constantly increasing, and it is anticipated that further continued improvement will become more difficult.

SPECIAL PERMITS

For Building construction during the year, the following special permits were granted by the Council:

Ordinance No. 31215 permits the Poole-Dean Co. to construct a one-story frame shed within the fire limits, on Lots 1 and 2, Block 229, Couch's Addition, for three years. Inasmuch as the Company could obtain a lease for but three years on the property, they desired to construct a frame building.

Ordinance No. 31252 permits Henry L. Corbett, Elliott R. Corbett and Hamilton F. Corbett to alter the Cambridge building on the Southwest corner of Third and Morrison, by changing the occupancy of the upper floors from rooms and offices to stores and manufacturing purposes. This building is of ordinary masonry construction, four stories in height, and, under the provisions of the Code, it could not be used for manufacturing purposes. The requirements of the Code for stairs are not fully complied with, and they are exempt from these requirements.

Ordinance No. 31441 permits the City, in the construction of the Auditorium at Third and Market Streets, to project steps onto the sidewalk, and permits stairs in the basement to be located under the stairs leading to the gallery. Inasmuch as the Auditorium covers the entire block, and the size of the building could not be properly reduced, it was necessary to extend certain steps over onto the sidewalk.

Ordinance No. 31479 permits Carl Keller to maintain a blacksmith shop in building on Lot 1, Block 4, Albina, within 30 feet of a dwelling, in violation of Section 654 of the Building Code, but the Ordinance provides that the portion of the building used as a blacksmith shop shall be located more than 30 feet from any dwelling.

Ordinance No. 31610 permits the Inland Investment Co. to construct a one-story frame building on Lots 5, 6, 7, and 8, Block 228, Couch's Addition, which property is within the fire limits. This permit is substantially the same as covered in Ordinance No. 31215. Ordinance No. 31215 was not made use of, and Ordinance No. 31610 was passed to take its place.

Ordinance No. 31700 permits the Strowbridge Estate to construct a marquise on the building located on Lots 4, 5 and 6, Block 14, City of Portland, and exempts them from the provisions of Section 697 of the Building Code. The marquise extends along the full store front of this building, which is in excess of two stories in height.

Ordinance No. 32158 permits the Spokane, Portland & Seattle Railway to erect and maintain a temporary frame shed on Blocks 217 and 225, Couch's Addition, in violation of Section 530 of the Building Code. The Code allows a mill constructed shed, and structure desired by the company deviated in minor particulars from the regulations for such mill constructed shed. Passage of the Ordinance, therefore, did not seem to be objectionable.

Ordinance No. 32291 permits Caroline A. Kamm to alter the first story of the two-story building at the northeast corner of First and Washington, for a public garage, in violation of Section 573 of the Building Code. This Ordinance is effective for six months only. The first story of the building being vacant, rendered it difficult for the owners to pay taxes; therefore, they were permitted to occupy the first story for a public garage for six months, to see whether a garage in this location would be profitable, and if so, at the end of six months, changes in the building would be made to provide for adequate safety.

Ordinance No. 32381 permits the Huth Estate to construct the second and third floors of the building on Lot 3, Block 212, Lownsdale Addition, for a live load of 75 pounds per square foot, in violation of Section 155 of the Building Code. Inasmuch as the occupancy of this building is to be of a light nature, the 75-pound load is considered safe.

H. E. PLUMMER,
Inspector of Buildings.

GENERAL

	Building Division		Electrical Division	
	1915	1916	1915	1916
Total days of inspection	1,235	981	1,610	1,247
Total number of inspections	23,142	17,430	19,532	16,238
Ordinance violations discovered	3,823	2,003	5,397	5,407
Municipal Court prosecutions	59	23	10	1
Circuit Court prosecutions	2	4	.....	.....
Jobs without permit	510	336	270	243
Elevator inspections	5	143	.....	.....
Complaints investigated	653	638	.....	.....
Billboard inspections	152	123	.....	.....
Sign inspections	46	264	.....	.....
Fire reports	361	315	.....	.....
**Dangerous buildings and wiring	11	1	31	69
Car tickets used by inspectors	3,761	3,102	5,882	5,810
Ratio visits to car tickets	6.1	5.6	3.3	3.03
Average value of daily permits	22,298.92	22,586.77	1,667.89	2,095.61
Average number permits per day	16.63	16.06	23.32	22.28
Average daily inspections per man	18.7	17.7	14.3	13.04
Receipts—Fees for permits	6,916.00	6,321.50	5,901.50	4,680.15
Receipts—Fees, billboard permits	87.00	15.50	.....	.....
Receipts acct. rejected appeals	60.00	50.00	.....	.....
Total receipts, fees and appeals	.....	.....	.....	.....
Letters written	2,447	1,661	503	780
Bulletins sent out	1	2	4	4
Sanitary inspection notices sent	.....	.....	.....	.....

GENERAL—Continued

	Plumbing Division		Total		% increase or decrease
	1915	1916	1915	1916	
Total days of inspection	1,476½	1,182½	4,321½	3,410½	21.08
Total number of inspections	12,815	9,259	55,489	42,927	22.63
Ordinance violations discovered	843	912	10,063	8,322	17.30
Municipal Court prosecutions	2		71	24	66.19
Circuit Court prosecutions			2	4	100. +
Jobs without permit			780	579	25.76
Elevator inspections			5	143	2760. +
Complaints investigated	48	10	701	648	7.56
Billboard inspections			152	123	19.07
Sign inspections			46	264	473.9 +
Fire reports			361	315	12.74
**Dangerous buildings and wiring			42	70	66.66+
Car tickets used by inspectors	3,909	3,583	13,552	12,495	7.79
Ratio visits to car tickets	3.2	2.6			
Average value of daily permits		*1,591.15	23,966.81	26,273.53	9.62+
Average number permits per day		11.78	39.95	50.12	25.45+
Average daily inspections per man	9.1	9.6			
Receipts—Fees for permits		1,946.25	12,817.50	12,947.90	1.01+
Receipts—Fees billboard permits			87.00	15.50	82.18+
Receipts acct. rejected appeals		10.00	60.00	60.00	
Total receipts, fees and appeals			12,964.50	13,023.40	.45+
Letters written	1,574	950	4,524	3,391	25.04
Bulletins sent out			5	6	20. +
Sanitary inspection notices sent	46	1	46	1	97.82

N. B.—+ Increase.

*Permits for Plumbing Division were not issued prior to April 1st, 1916.

**This sheet shows only one dangerous building. See sheet headed "Table of Violations, Building Division."

BUILDING PERMITS ISSUED FROM DECEMBER 1, 1915, TO NOVEMBER 30, 1916

Month	Steel Frame Construction		Reinforced Concrete Construction		Mill Construction	
	No.	Value	No.	Value	No.	Value
December, 1915			1	$ 35,000.00	1	$ 25,000.00
January, 1916						
February						
March					1	28,000.00
April	1	$ 10,000.00				
May	2	60,000.00				
June	1	600,000.00			1	25,000.00
July			1	2,100.00		
August			3	14,500.00		
September	1	1,000,000.00	1	2,000.00		
October			4	410,700.00	2	30,300.00
November						
Totals	5	1,670,000.00	10	464,300.00	5	108,300.00

BUILDING PERMITS ISSUED FROM DECEMBER 1, 1915, TO NOVEMBER 30, 1916—Continued

Month	Ordinary Construction		Frame Construction		Alterations and Repairs	
	No.	Value	No.	Value	No.	Value
December, 1915	1	$110.00	102	$ 158,305.00	134	$ 66,090.00
January, 1916	2	19,500.00	57	73,105.00	121	75,695.00
February	9	43,425.00	151	258,640.00	197	93,250.00
March	7	73,525.00	11	243,505.00	277	70,740.00
April	7	133,230.00	191	179,920.00	300	120,325.00
May	12	111,300.00	171	218,855.00	267	75,835.00
June	6	86,810.00	121	177,500.00	185	70,995.00
July	1	90,000.00	150	167,400.00	194	71,475.00
August	6	258,600.00	131	131,975.00	271	84,660.00
September	5	22,000.00	175	219,980.00	237	70,870.00
October	2	1,075.00	158	176,845.00	223	74,200.00
November	1	1,000.00	101	173,400.00	168	65,495.00
Totals	59	$ 840,575.00	1,719	$ 2,179,430.00	2,574	$ 939,630.00

BUILDING PERMITS ISSUED FROM DECEMBER 1, 1915, TO NOVEMBER 30, 1916—Continued

Month	Wreck		Move		Excavate	
	No.	Value	No.	Value	No.	Value
December, 1915	7	$ 700.00	2	$ 240.00		
January, 1916	4	825.00				
February	4	550.00	5	700.00	2	$ 1,500.00
March	4	700.00	6	1,340.00	1	1,000.00
April	8	1,250.00	3	325.00	4	2,350.00
May	9	3,025.00	3	460.00		
June	2	150.00			1	500.00
July	4	1,275.00	1	150.00	1	5,000.00
August	4	1,350.00	3	275.00	1	1,500.00
September	3	425.00	2	205.00	2	2,000.00
October	1	75.00				
November	5	1,050.00	2	300.00		
Totals	55	$ 11,375.00	27	$ 3,995.00	12	$ 13,850.00

BUILDING PERMITS ISSUED FROM DECEMBER 1, 1915, TO NOVEMBER 30, 1916—Continued

Month	Docks—New		Docks—Alterations and Repairs		Billboards	
	No.	Value	No.	Value	No.	Value
December, 1915			1	$ 1,000.00	1	$ 360.00
January, 1916			2	250.00		
February	1	2,800.00	4	5,750.00		
March			3	1,750.00	2	600.00
April	1	10,000.00	2	365.00	2	700.00
May	2	4,000.00	6	5,410.00	5	1,475.00
June	2	10,260.00	1	12,000.00	4	495.00
July	2	30,425.00	1	700.00	4	750.00
August			4	4,525.00	1	200.00
September			2	1,300.00	2	900.00
October			2	2,750.00	7	1,815.00
November	2	10,500.00	2	350.00	3	280.00
Totals	10	$ 67,985.00	30	$ 36,150.00	31	$ 7,575.00

BUILDINGS GRADED ACCORDING TO OCCUPANCY

Month	Grade I Public Buildings		Grade II Quasi Public Buildings, Hotels, Office Bldgs., Stores, etc.		Grade III Tenements	
	No.	Value	No.	Value	No.	Value
December, 1915	1	$ 35,000.00	12	$ 48,900.00	1	$ 20,000.00
January, 1916	.....	.....	4	24,000.00	.....	.....
February, 1916	1	1,800.00	15	79,300.00	1	32,000.00
March	3	3,100.00	14	115,975.00	1	2,000.00
April	2	12,000.00	8	17,950.00	1	125,000.00
May	9	123,500.00	11	73,800.00	1	15,000.00
June	4	605,300.00	10	79,275.00	2	100,000.00
July	2	19,500.00	10	26,550.00	1	90,000.00
August	5	250,500.00	11	25,000.00	1	30,000.00
September	7	1,055,850.00	24	56,050.00	2	31,000.00
October	1	2,000.00	11	486,050.00	.....	.....
November	2	11,000.00	13	109,130.00	1	12,000.00
Total3	37	$ 2,119,550.00	143	$ 1,141,980.00	.....	.....

BUILDINGS GRADED ACCORDING TO OCCUPANCY—Continued

Month	Grade IV Dwellings and Flats		Grade V Stables and Sheds		Grade VI Miscellaneous	
	No.	Value	No.	Value	No.	Value
December, 1915	42	$ 108,800.00	45	$ 5,345.00	4	$ 370.00
January, 1916	27	63,300.00	23	2,805.00	5	2,500.00
February	56	174,800.00	79	12,400.00	8	1,765.00
March	76	208,050.00	119	13,755.00	6	2,150.00
April	58	152,225.00	120	13,215.00	10	2,760.00
May	61	166,250.00	100	10,605.00	3	1,000.00
June	34	93,050.00	65	6,785.00	14	4,900.00
July	41	112,850.00	96	10,300.00	2	300.00
August	31	77,000.00	84	8,725.00	8	13,850.00
September	32	86,750.00	114	13,030.00	3	1,300.00
October	29	103,750.00	116	13,495.00	9	13,625.00
November	12	33,150.00	72	8,085.00	2	1,035.00
Totals	499	$ 1,379,975.00	1,033	$ 118,545.00	74	$ 45,555.00

BUILDING PERMITS ISSUED DURING THE PAST YEARS

Years	Number	Total Valuation	Average Value of Permit
1900	392	$ 944,985.00	$ 2,410.00
1901	745	1,529,143.00	2,050.00
1902	1,244	2,730,660.00	2,195.00
1903	1,628	4,281,056.00	2,630.00
1904	1,720	4,028,225.00	2,340.00
1905	2,318	4,183,368.00	1,805.00
1906	3,166	6,902,032.00	2,180.00
1907	3,890	9,446,982.00	2,430.00
1908	4,849	10,405,151.00	2,145.00
1909	4,739	13,481,380.00	2,845.00
1910	6,523	20,886,202.00	3,200.00
1911	7,686	19,152,370.00	2,495.00
1912	8,224	14,652,071.00	1,780.00
1913*	*6,244	*12,316,350.00	1,970.00
1914 (Dec. 1, 1913 to Nov. 30, 1914)	6,166	7,373,285.00	1,195.00
1915 (Dec. 1, 1914 to Nov. 30, 1915)	4,633	6,210,255.00	1,345.00
1916 (Dec. 1, 1915 to Nov. 30, 1916)	4,506	6,335,590.00	1,406.00
Totals	68,673	$ 144,860,105.00	$ 2,109.00

* 11 months only covered in report.

TABLE OF VIOLATIONS BUILDING DIVISION

1.	Poor foundations	91
2.	Defective construction	423
3.	Too close to lot lines	36
4.	Defective chimney	286
5.	Heating apparatus and enclosures	46
6.	Elevators and enclosures	135
7.	Stair and shaft enclosures	71
8.	Roofs and roof drainage	76
9.	Fire blocks and bridging	352
10.	Sidewalk and street obstructions	49
11.	Light and ventilation	36
12.	Fire protection of openings	20
13.	Defective scaffolds	1
14.	Stable regulations	8
15.	Miscellaneous	225
16.	Fire escapes, exits, stand pipes, etc.	...
17.	Frame buildings in fire limits	67
18.	Dangerous buildings	81
	Total	2,003

**This sheet shows Dangerous Building "81," but upon close inspection it is found that only one of these buildings should have been termed "Dangerous."

PLUMBING PERMITS ISSUED

Month, 1916	Number	Total Valuation	Average Value per Permit
April	324	$ 33,095.00	$ 102.14
May	345	52,165.00	151.20
June	226	33,995.00	150.42
July	274	31,910.00	116.45
August	298	44,780.00	150.26
September	248	26,820.00	108.85
October	275	53,340.00	193.60
November	213	19,850.00	93.19

ELECTRICAL PERMITS ISSUED

Month	1912			1913			1914		
	No.	Total Valuation	Av. Value per Permit	No.	Total Valuation	Av. Value per Permit	No.	Total Valuation	Av. Value per Permit
December							615	$ 47,715.00	$77.60
January				583	$ 44,700.00	$76.80	632	34,590.00	54.60
February				495	34,350.00	69.40	544	36,015.00	66.50
March				639	106,070.00	166.60	863	56,275.00	65.20
April				709	49,450.00	69.80	769	34,615.00	45.10
May				665	41,445.00	62.30	711	37,925.00	53.30
June				594	54,280.00	91.50	603	53,150.00	88.00
July				646	58,085.00	89.95	580	37,750.00	65.00
August	318	$ 16,191.00	$ 50.80	691	67,865.00	98.00	632	50,345.00	19.60
September	567	28,360.00	50.00	761	49,940.00	65.50	744	41,925.00	56.40
October	708	40,895.00	57.80	864	102,510.00	118.80	635	38,590.00	60.75
November	568	42,505.00	75.00	689	44,115.00	64.00	531	37,155.00	69.90
	2161	$ 127,951.00	$ 59.20	7336	$ 652,810.00	$ 88.98	7859	$ 506,050.00	$ 64.45

Month	1915			1916			Total		
	No.	Total Valuation	Av. Value per Permit	No.	Total Valuation	Av. Value per Permit	No.	Total Valuation	Av. Value per Permit
December	486	$ 76,355.00	$ 157.74	465	$ 40,450.00	$ 86.99	1,566	$ 164,520.00	$ 105.06
January	442	27,430.00	62.05	388	28,470.00	73.37	2,045	135,190.00	70.81
February	494	24,525.00	49.64	375	19,540.00	52.10	1,908	114,430.00	59.97
March	541	40,405.00	74.68	611	41,000.00	67.10	2,654	243,750.00	91.84
April	579	35,330.00	61.02	649	48,440.00	74.48	2,706	167,835.00	62.02
May	524	53,265.00	101.65	580	43,250.00	74.57	2,480	175,885.00	70.89
June	492	29,015.00	58.97	471	37,110.00	78.85	2,160	173,555.00	80.35
July	509	36,545.00	71.79	417	28,220.00	67.67	2,152	160,600.00	74.63
August	572	46,215.00	80.97	551	83,845.00	152.17	2,764	265,461.00	96.04
September	663	36,155.00	54.53	547	48,560.00	88.77	3,282	204,940.00	62.44
October	638	30,445.00	47.42	669	85,295.00	127.49	3,514	297,730.00	84.73
November	556	28,825.00	51.84	528	43,640.00	82.65	2,872	196,240.00	68.33
	6496	$ 464,510.00	$ 72.72	6251	$ 547,820.00	$ 87.77	30,103	$2,300,136.00	$ 76.40

PLUMBING DIVISION

The following is the report of the Board of Plumbing Appeal from April 1, 1916, to December 1, 1916:

Regular meetings held	1
Special meetings held	2
Appeals considered	1
Appeals denied	1

At a special meeting held in the City Hall on April 4 the following recommendation was arrived at: Contracts let under the old code previous to March 20, signed by both parties and delivered, on which work is started within sixty (60) days, should be allowed to proceed under the old code, provided that affidavits are given concerning the facts.

The above recommendation was made to cover cases where contractors had figured work under the old code.

The following general rulings were made:

April 12, Section 135. "It is intended, under this section, to allow flush-rim hoppers or wash-out toilets in a small room on a porch with no door or other opening leading directly into the building. The use of this style of toilet will be allowed in out-buildings or stables. It was the intention not to allow these toilets to be installed inside of a building used as a residence, store or factory or where food products are prepared or sold."

April 12, Section 44. "The definition of "trap" will be understood to include the horizontal connection between a fixture and the wall or when an "S" trap is used, the connection between a fixture and the floor, but the distance between the trap proper and the vent pipe shall not exceed twenty-four (24) inches."

June 20, Section 99. "One and one-quarter (1¼) inch galvanized waste will be allowed for a single basin or pantry sink on a branch from the main running line, provided such waste does not exceed one (1) foot in length. This same ruling will apply to sinks, but only one and one-half (1½) inch waste must be used."

June 20, Section 108. "Two fixtures will be allowed set back to back on a one and one-half (1½) inch galvanized waste pipe for any fixture having a one and one-quarter (1¼) inch or one and one-half (1½) inch trap on a branch from the main running line, provided such waste does not exceed one (1) foot in length."

This ruling will be in force and effect only until such time as the old code material can be no longer used as provided in Section 153.

The Board wishes to recommend the following changes in the Plumbing Code:

PERMIT REQUIRED

Section 3. No work upon the installation, construction, alteration or repair of any plumbing or drainage system in any building or premises shall be commenced unless a permit be first obtained from the Bureau of Buildings.

In the meaning of this section, the word "repair" shall not apply to ordinary repairs to water pipes, faucets, hot water tanks and water backs, or to the removal of obstructions in fixtures or piping which are generally known and considered as maintenance work, for which

no permit will be required, but shall apply to all changes in the location or renewal of fixtures.

FEES FOR PERMITS

Section 7. Before a permit shall be issued, fees in accordance with the table below shall be paid:

For each fixture	25 cents
For each connection ready to receive a future fixture	25 cents
For each cesspool or sewer connection (not included in a regular plumbing permit)	50 cents
For each combination sink and laundry tray	50 cents
For each set of laundry trays considered as one fixture either three-part tray or three single trays	25 cents
For each floor drain connected to the drainage system	25 cents

The minimum charge for a permit shall be fifty (50) cents.

If alterations to the plumbing of an existing building be desired, the permit fee shall be based upon the number of fixtures affected or replaced. No fee shall be exacted for work generally known as maintenance work. No fee shall be exacted for a permit for the renewal of fixtures where no new fixture is cut into the system and no change is made in the waste or vent lines.

If any work on the construction, alteration, or repairs of a plumbing system be commenced without a permit having first been secured, double the fees above stated shall be exacted when a permit is finally issued. Payment of such double fees, however, shall in no way relieve such person of the penalties imposed for violation of this code. (See Section 3 for maintenance work.)

PLUMBING IN BUILDINGS MOVED OR MATERIALLY ALTERED

Section 4. All soil, waste and vent pipes in good condition forming a part of the plumbing system in any building materially altered or moved, may be continued in use if properly installed; provided, that if the plumbing system in such building is remodeled or moved to another part thereof, or additional fixture or fixtures are installed, such old material, if used, shall conform in size to the requirements of this code on new work, and provided, further, that if the plumbing system in such building as a whole or in part is in a defective condition, the defective portion of such system shall be made to conform to the requirements of this code and in all cases new work done in connection with the existing system shall conform to this code, and when required by the Plumbing Division shall pass the test prescribed in Section 12.

When any fixture is replaced by a new or different fixture, the same shall be vented and trapped to comply with the requirements of this code, unless it shall be found to be impracticable to vent such fixture, in which case the matter shall be submitted to the Bureau of Buildings for a decision.

UNSANITARY

Section 45. The conditions to which the word "unsanitary" shall apply shall include the following:

(a) Any fixture whose trap does not maintain a proper seal.

(b) Any fixture insufficiently supplied with water to flush it and to maintain it in a clean condition.

(c) Any imperfect fixture, pipe or trap.

(d) Any trap the seal of which is not protected from syphonage by a vent, excepting traps of the non-syphon type as specified in Section 121.

The foregoing enumeration of conditions to which the term "unsanitary" shall apply, shall not preclude the application of that term to conditions that are in fact unsanitary.

TRAP

Section 44. A "trap" is a fitting so constructed as to prevent passage of air or gas through a pipe without materially affecting the flow of waste water in the system. A trap includes the horizontal connection between fixture and wall or floor, but the distance between the trap proper and vent pipe shall not exceed twenty-four (24) inches.

The "size of a trap" shall be that of its outlet. (For seal of Trap, see Section 37.)

BRASS CAULKING FERRULES

Section 48. Brass caulking ferrules shall be made of the best quality of cast brass with a minimum length of four (4) inches and a minimum diameter of two and one-quarter (2¼) inches. The weights shall be not less than those specified in the following table:

Diameter	Weight
2¼ inches	1 pound
3½ inches	1 pound 12 oz.
4½ inches	2 pounds 8 oz.

CAST IRON PIPE

Section 55. The sixth sentence should read as follows: The wall thickness of extra heavy pipe at the bead of the hub end shall be not less than one-half (½) of one (1) inch, and at the bead of the spigot end shall be not less than seven-sixteenths (7-16) of one (1) inch.

CAST IRON FITTINGS

Section 56. The attached table of weights should be used in place of the one now in the code.

TERRA COTTA PIPE, JOINTS AND LAYING OFF

Section 66. Terra cotta pipe shall have joints made with a mortar composed of one (1) part of cement of an approved brand and two (2) parts of clean, sharp sand, well worked into the bells and smoothed with a bevel away from the joints.

The inside of the pipe shall be carefully swabbed to prevent projection into the pipe of loose materials or of mortar.

Terra cotta pipe used for rain drains on the house side of a trap or connected to a cesspool or dry well for rain water only shall be not less than one (1) foot below the surface of the ground, but in all other cases the distance below ground shall be not less than two (2) feet.

CHANGE IN DIRECTION OF PLUMBING PIPES

Section 86. All cast iron, wrought iron, lead or brass pipes used in waste or soil lines shall be laid in as direct a line as practicable, but where changes in direction are necessary, these shall be made with Y branches, ½ Y branches or with 1-16, 1-8, 1-6, 1-5 or 1-4 bends, provided that when bends are used in a horizontal position, a long sweep bend shall be used, and, provided further, that this section shall not apply to toilet bends, either iron or lead.

SIZE OF TERRA COTTA PIPE

Section 88. The size of terra cotta sewer pipe shall be not smaller than the house drain. If a water closet be connected to the house drain, the house sewer shall be not less than six (6) inches in diameter, but in no case shall the diameter of the house sewer be less than three (3) inches. (For foundations of terra cotta pipe, see Section 68; for joints and laying of terra cotta pipe, see Sections 66, 67 and 69.)

TERRA COTTA PIPE SEWERS CONNECTING TO CAST IRON SEWERS

Section 92. No terra cotta pipe sewer shall be connected to a cast iron sewer, except with express permission of the Bureau of Buildings, but no such connection shall be made within five (5) feet of the foundation of any building. A cast iron increaser or fitting of sufficient size to receive the barrel of the terra cotta pipe and to permit of a workman-like connection, shall be installed.

SOIL PIPES

Section 95. All soil pipes shall be of wrought iron or extra heavy cast iron. With wrought iron pipe, recessed drainage fittings shall always be installed.

In the clearing of soil lines, all holes cut into such pipes, shall be tapped and closed with a metal plug made gas and water-tight.

WASTE PIPES

Section 98. All waste pipes shall be constructed of cast iron, lead, brass or wrought iron. If wrought iron pipe be used, the pipe shall be reamed and all fittings shall be recessed drainage fittings. (For connections and fittings of waste pipes, see Section 94; for fall in waste pipe, see Section 130; for height of waste pipe, see Section 114.) When cast iron pipe is used, the weight shall be extra heavy except for stable drains, requirements for which are given in Section 141.

In the clearing of waste lines, all holes cut into such pipes shall be tapped and closed with a metal plug made gas and water-tight.

SIZE OF WASTE PIPE

Section 99. No waste pipe shall be smaller than the trap which it serves. If wrought iron pipe be used, the minimum diameter shall be two (2) inches for a sink, one and one-half (1½) inches for a wash basin, pantry sink, bathtub, laundry tray or urinal, and one and one-quarter (1¼) inches for a drinking fountain, fountain cuspidor or refrigerator. In every other case the diameter shall be that specified in the following table:

Size of waste pipes for fixtures with 1¼-inch trap:

Number	Name of Fixture	Size of Waste
1 to 2	Wash basins, pantry sinks, drinking fountains, fountain cuspidors, etc.	1¼ inches
3 to 6	Wash basins, pantry sinks, drinking fountains, fountain cuspidors, etc.	1½ inches
7 to 16	Wash basins, pantry sinks, drinking fountains, fountain cuspidors, etc.	2 inches
17 to 30	Wash basins, pantry sinks, drinking fountains, fountain cuspidors, etc.	2½ inches
31 to 50	Wash basins, pantry sinks, drinking fountains, fountain cuspidors, etc.	3 inches
51 to 80	Wash basins, pantry sinks, drinking fountains, fountain cuspidors, etc.	3½ inches
Over 80	Wash basins, pantry sinks, drinking fountains, fountain cuspidors, etc.	4 inches

(Balance of section as at present.)

LIMIT OF LENGTH OF WROUGHT IRON WASTE PIPES

Section 100. No wrought iron pipe used as a waste pipe shall exceed in length that specified in the following table except as specified in Section 113:

Diameter	Length
1¼ inches	20 feet
1½ inches	25 feet
2 inches	50 feet

VERTICAL WASTE PIPES SHALL BE EXTENDED THROUGH THE ROOF

Section 102. If vertical waste lines extend to fixtures located on or above the second floor, these lines shall extend in full size or equivalent size, as given in Section 103, through the roof, and in the event there is used, in place of the minimum sized waste pipes allowed by Sections 99 and 100, a larger sized waste pipe with no increase in length, then the vent from the fixture served by such waste may be the minimum size allowed by Sections 99 and 100.

LIMIT OF LENGTH OF VENT PIPES

Section 105. No vent pipe shall exceed in length that specified in the following table except as specified in Section 113:

Diameter	Length
1¼ inches	20 feet
1½ inches	25 feet
2 inches	50 feet

UNIFORM SIZE OF VENTS IN HIGH BUILDINGS

Section 113. Same as at present with the exception of the table, which will be as follows:

Maximum Number of Fixtures Served	Size of Waste or Vent
Not over 16 wash basins	2 inches
Not over 30 wash basins	2½ inches
Not over 50 wash basins	3 inches

VENTING OF TRAPS

Section 121. Every trap shall be provided with a vent, except that a vented trap for a restaurant sink, a wash basin in a barber shop, a soda fountain, a vegetable spray sink, a fountain cuspidor or similar fixture, when the installation of a vent would not be feasible, will not be required, but in such event such trap shall be of the drum type in

diameter not less than two and one-half (2½) inches with a water seal not less than four (4) inches.

RAIN WATER TRAPS

Section 122. Every rain water and running trap shall be provided with a cleanout, located in an accessible position. Conductor pipes, when located within twelve (12) feet of any window or similar opening, shall have rain water traps supplied with fresh water as required for floor drains in Section 139. Cast iron pipe, to be used for a cleanout, not less than one (1) foot in length, shall be run to the surface of the ground.

SIZE OF RAIN WATER LEADERS

Section 126. The diameter of pipes for rain water or roof leaders connecting to a cesspool for rain water only or a dry well or together with house drains and other pipes when connecting to a sewer, shall be not less than the sizes given in the following table when the grade of pipes is one-quarter (¼) of an inch to the foot.

Area of Roof Drained Square Feet	Diameter of Leader Inches
Not over 250	2
Not over 1,500	3
Not over 4,000	4
Not over 7,250	5
Not over 12,500	6
Not over 18,000	7
Not over 27,000	8
Not over 36,000	9
Not over 50,000	10
Not over 67,000	11
Not over 89,000	12

When the grade, given above, is doubled, the roof area may be increased fifty (50) per cent over that given in the table and proportional increases or decreases in roof area served for greater or less increases or decreases in the grades shall be made. If the roof area exceeds five thousand (5,000) square feet and the roof drains are run into the house sewer, all fixtures, including floor drains in the basement, shall be connected by a branch line which shall be provided with a back water check valve and a gate valve, both accessibly placed.

ROOF LEADERS—OUTSIDE

Section 127. All outside roof or rain water leaders shall be constructed of metal and shall connect to a cast iron drain pipe extending not less than one (1) foot above the ground for a building not abutting the street line, and not less than five (5) feet above the ground for a building abutting the street lines. The cast iron drain pipe shall extend not less than five (5) feet from the walls of the building and shall be connected to a cast iron, terra cotta or cement pipe, which shall be installed so as to dispose of roof water as provided in Section 128.

Outside roof or rain water leaders, when constructed of material other than that specified for inside leaders in Section 123, shall be trapped. If the trap be located outside of the building, it will not be necessary to supply same with water.

When a roof or rain water trap is installed outside of a building, the same must be at least one (1) foot below the surface of the ground.

DISPOSAL OF RAIN WATER FROM NEW AND OLD BUILDINGS

Section 128. All buildings shall be kept provided with gutters and downspouts, as covered in the building code, in such a manner as to prevent damage to the walls and foundations of any building, rain water from roofs leaking into basements, damage to property or unsanitary conditions. Water from roofs shall not be permitted to run over sidewalks. Every building over five hundred (500) square feet in roof area hereafter erected within one-half block of a sewer shall have the downspouts connected to the sewer. Buildings hereafter erected within one-half block of the sewer, having a roof area of five hundred (500) square feet or less, shall be connected to the curb beneath the surface of the sidewalk or shall be connected to the sewer. Buildings hereafter erected over one-half block from a sewer, shall have the downspouts connected to a dry well or run under the sidewalk to the curb.

Existing buildings in the Inner Fire Limits shall be provided with proper gutters and downspouts maintained in a serviceable condition and such downspouts shall be connected to the sewer on or before January 1, 1919. Existing buildings outside of the Inner Fire Limits shall have gutters and downspouts maintained in a serviceable condition or shall be made to conform to the regulations for new buildings over one-half block away from the sewer.

When downspouts are connected to a dry well, the dry well shall be located, if possible, not less than ten (10) feet from the building, and in any other case, under the direction of the Bureau of Buildings, the well shall penetrate the gravel strata at least five (5) feet and shall have an inside diameter not less than two (2) feet four (4) inches and the minimum height from the bottom to the springing line of the arch shall be six (6) feet.

The dry well shall have side walls and arch constructed as specified for cesspools in Section 144.

Rain water pipes shall not connect to a cesspool or to a drain pipe connecting to a cesspool used for the disposal of house sewage.

All rain water drain pipes when connected to a sewer shall connect directly with the house drain or house sewer. (For size of rain water drains, see Section 126.) Outside roof or rain water leaders when connected to a sewer shall be tapped unless the leaders are constructed as required by Section 123 for inside leaders. The rain water traps need not be supplied with water provided the traps are placed outside of the building. All rain water traps shall be located not less than one (1) foot below the surface of the ground and shall be protected from frost.

When terra cotta traps are used, cast iron pipe shall be used for a cleanout, not less than one (1) foot in length, run to the surface of the ground.

CONSTRUCTION AND LOCATION OF CLEANOUTS

Section 129. A cleanout through a "Y" branch shall be placed on the main line just inside of basement wall where the pipe leaves the building. A cleanout shall be placed on all horizontal sink lines running under the ground or suspended from first floor joist. This shall apply to all dwellings. In apartment houses, flats and large buildings, a cleanout shall be placed on the main line in an accessible

place. All cleanouts shall be so located that the use of same as a floor drain is impossible.

The body of such cleanout shall be constructed of heavy cast iron or of brass of the weight specified for soil pipe or brass ferrules, respectively, and shall have its opening closed with a threaded brass plug having at least six (6) turns of taper thread, in iron pipe size. Barret cleanouts or others of similar type may be used only when they are made gas and water tight. The diameter of a cleanout need not be greater than four (4) inches, but for all stacks of lesser diameter than four (4) inches, the cleanout shall have the same diameter as the stack.

STABLE FLOOR DRAINS

Section 141. Stables shall be provided with a catch basin not less than twelve (12) by twelve (12) inches in size with a depth not less than twelve (12) inches and the drainage system shall be provided with a cleanout on the sewer side of the drain and a cleanout at the end of the main drain on the house side of the catch basin.

Standard weight cast iron pipe may be used for floor drains on the house side of the catch basin. Every stable floor drain shall be connected to a drainage system with a vent stack in diameter not less than four (4) inches located on the sewer side of the catch basin. The main drain on the house side of the catch basin shall be not less than three (3) inches in diameter and shall run full size through the roof. Branch lines shall be not less than three (3) inches in diameter and if the length of any line exceeds twenty (20) feet, the line shall be vented through a vent pipe not less than two (2) inches in diameter extended full size through the roof.

WOODEN SINKS

Section 142. Except in photograph galleries, public laundries and laboratories where acids are used, the use of wooden or metal lined wooden sinks is expressly forbidden. If such a metal lined sink be installed, holes shall be bored in the bottom of the wooden portion to indicate leakage therefrom.

CONSTRUCTION OF CESSPOOLS

Section 144. (a) Permanent Cesspools: Permanent cesspools shall have walls constructed of brick, in thickness not less than four (4) inches, laid with or without mortar and with or without openings, provided the openings, measured on the outside, shall have no greater dimension than three (3) inches. Every cesspool shall have an arch constructed of brick laid in 1:2 cement mortar or of broken stone or gravel concrete not leaner than 1:3:5 and the top of such arch shall be located not less than three (3) feet below ground level. The diameter of the cesspool shall be not less than four (4) feet and the depth from the bottom to the top of the arch not less than fifteen (15) feet. It is provided, however, that in cemented gravel the brick wall may be omitted with the express permission of the Bureau of Buildings and the arch spring from a ledge, and it is further provided that where the soil conditions are very unusual, the diameter of the cesspool may be reduced to not less than three (3) feet with the cubical contents not less than that specified for cesspools of larger diameter, with the approval of the Commissioner of Public Works. No cesspool shall be installed within ten (10) feet of any building or within five (5) feet of a lot line except if the building served cover such part of its

lot as will make compliance with these provisions impossible, the cesspool shall be located as directed by the Bureau of Buildings, but in no case shall the top of the arch be less than three (3) feet below the lowermost floor level, including basement or cellar floor.

(b) Temporary Cesspools: In districts where sewers will be constructed in a short time, the Bureau of Buildings may, with the approval of the Commissioner of Public Works, grant permission to construct temporary cesspool for a period not longer than one (1) year. The construction need not conform to the requirements of paragraph (a) but shall be safe for the temporary period and shall meet the approval of the Bureau of Buildings. Under any other conditions, the cesspool shall be built as specified in paragraph (a).

HYDRAULIC ELEVATORS

Section 148. The discharge from hydraulic elevators, where the discharge pipe exceeds two (2) inches in diameter, shall be connected directly to the main sewer in the street or be connected indirectly with the house drain or house sewer through an open tank having a trap not exceeding four (4) inches in diameter. This tank shall have a sufficient capacity to receive the full discharge from a single operation of the elevator.

EXHAUST STEAM, BLOW-OFF AND DRIP PIPES

Section 151. (a) The discharge from boiler blow-offs shall not be directly connected with any sewer, house drain, soil or waste pipe or rain water conductor, but shall be connected to a condensing tank, the waste or overflow from which shall be carried to the drainage system in a suitable pipe equipped with a deep seal trap. Every such tank shall be provided with at least one (1), two (2) inch vapor pipe, run independently through the roof or to the smokestack. The tank shall be of sufficient size to accommodate a volume of water of a sectional area equal to the horizontal projection of the boiler served, and of a depth equivalent to one (1) gauge, as measured on the boiler, but in no case shall the tank be of less dimension in horizontal projection than twenty-four (24) inches by thirty-six (36) inches.

(b) No steam exhaust, steam trap or drip pipe under pressure shall be connected directly with any sewer, house drain, soil or waste, or rain water leader, but shall connect to a receiving or blow-off tank as required for boiler blow-off. The tank shall be large enough to cool the water to a temperature of not more than 140 degrees F. before discharging into the drainage system.

(c) Drip pipes from radiators, steam tables, etc., may discharge over a floor drain or open fixture, where the volume of water discharged does not exceed ten (10) gallons per hour.

(d) Heating boilers, where the pressure does not exceed five (5) pounds, may discharge over a floor drain or open fixture.

(e) Within the meaning of this section, any boiler blow-off, steam exhaust, steam trap, or any other steam pipe where the pressure exceeds five (5) pounds, shall be governed by paragraphs (a) and (b).

(f) The discharge from blow-offs or receiving tanks shall be taken from the bottom of such tanks.

REFRIGERATORS

Section 152. No waste line from a refrigerator or other receptacle for the storage of food shall be connected directly to any sewer, soil

or waste line nor discharged over a water closet tank. The waste line may discharge into an open vessel or to a floor drain. Every such waste line shall be of galvanized wrought iron, lead or cast iron, so arranged as to be readily cleansed, and shall be provided with a proper trap. A refrigerator bell trap may be used. The minimum diameter of such waste line shall be one (1) inch. The waste pipe for two (2) and not more than four (4) refrigerators shall be not less than one and one-quarter (1¼) inches in diameter and for more than four (4) refrigerators the waste shall be not less than one and one-half (1½) inches in diameter. Every waste line that extends to refrigerators on more than one (1) floor shall extend in full size through the roof. Recessed drainage fittings shall be used on all waste pipes from refrigerators for more than one (1) refrigerator.

DRAINAGE OF FIXTURES BELOW SEWER LEVEL

Section 143½. All fixtures installed below the level of the sewer shall discharge into a sump or receiving tank, made gas-tight, and ventilated by extending a vent pipe not less than two (2) inches in diameter to a point at least two (2) feet above the building, as provided for in Section 114, and all fixtures re-vented as required in Section 106. The re-vent may connect to the vent from the sump or receiving tank or vice-versa, if such vent is of sufficient size, and if this is not possible, the main re-vent shall run independently through the roof. The contents of said sump or tank shall be lifted and discharged into the drainage system or independently into the sewer by an approved objector or some approved method.

EXTRA HEAVY

	2	3	4	5	6	3x2	4x2	4x3	5x2	5x3	5x4	6x2	6x3	6x4	6x5
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
1/4 bends, regular	6¾	10¼	15	19	23½	....	....	....	....	....	....	....	....	....	....
1/4 bends, short sweep	8¼	12½	17¾	22½	27½	....	....	....	....	....	....	....	....	....	....
1/4 bends, long sweep	10¼	15¾	22	27½	33½	....	....	....	....	....	....	....	....	....	....
1/5 bends	6¼	9¾	13¾	17½	21½	....	....	....	....	....	....	....	....	....	....
1/6 bends	6	9¼	13	16½	20	....	....	....	....	....	....	....	....	....	....
1/8 bends	5½	8½	12¼	15¼	18¼	....	....	....	....	....	....	....	....	....	....
1/16 bends	5	7¾	10¾	13¼	15¾	....	....	....	....	....	....	....	....	....	....
Double 1/4 bends	10¾	16¼	23	29	36	15½	20½	22	....	....	....	....	....	....	....
High heel inlet 1/4 bends	9¼	14	19½	....	....	13	17½	18½	21½	22½	23½	26	27	28	....
Low heel inlet 1/4 bends	9½	14½	20½	....	....	13½	18	19¼	22½	23½	24½	27	28	29½	....
Reducers	....	....	....	....	....	6¼	7	8½	8	9¼	10¾	8¾	10¼	11¾	12¾
Increasers	....	....	....	....	....	8¾	10½	12	12	13½	14¾	13½	14¾	16¼	17½
San T. & Y. with 2 in. side outlet	Add 4¼ lb. to weight of regular fitting.														
Tapped San crosses tapped to 2-in	10¾	....	....	....	....	13¾	17	....	19¾	....	....	23	....	....	....
Combination Y and 1/8 bend	12	18¾	27	35	44½	15	18¼	22½	21	25½	30½	24	29	34	39
Double Y branches	14¾	23	32	41½	52	17¾	21	26½	24	29½	35½	27	33	39	45½
Double 1/2 Y branches	13½	20½	28½	35½	43½	16¾	19¾	24	23	27	31½	25½	30	35	39
Double inv. Y branches	15¼	23½	33	42½	53½	18¾	22½	27½	25½	31	37	29	34½	41	47
Y branches	11	17	24	31½	39½	14	17¼	20½	20	23½	27½	23	27	31	35
1/2 Y branches	10¼	15½	21½	27½	34	13½	16½	19	19½	22	25	22½	25½	28½	31
Upright Y branches	12½	19½	28	36½	46	15¾	18¾	23	21½	26½	31½	24½	29½	35	40
Inverted Y branches	11½	18	25½	33	41½	15	18¾	22	22	25½	29½	25½	29½	33	37
Tapped inv. Y branch	10¼	....	....	....	....	13¾	17½	....	21	....	....	24	....	....	....
Sanitary tees	11	16¼	22½	28	34½	14	17½	19¾	20	23	25½	23	26	29	31½
Tapped san. tees tapped to 2-in	9	....	....	....	....	12	15¼	....	18	....	....	21¼	....	....	....
Tees, plain, tapped to 2-in	8¾	....	....	....	....	11¾	15	....	17¾	....	....	20½	....	....	....
Tees, plain	10¼	15¼	21	26½	32½	13¼	16½	18¾	19¼	22	24½	22½	25	27½	30
Vent branch	11½	17¾	25	32½	41	14¾	17¾	21½	21	24½	28½	23½	27½	31½	36
Tapped vent branch	11¼	....	....	....	....	14¼	17½	....	20¼	....	....	23	....	....	....
1/2 S. or P. trap	10½	17¼	25½	34½	45	....	....	....	....	....	....	....	....	....	....
3/4 S. trap	11¼	18½	27½	37½	49	....	....	....	....	....	....	....	....	....	....
S. trap	12	20	30	40½	53½	....	....	....	....	....	....	....	....	....	....
Running traps	11¾	19	27½	37	448	....	....	....	....	....	....	....	....	....	....
Running traps with hub vent	14½	23	33	43½	55½	22	31	32	40½	41½	43	51½	52½	54	55
Running traps, double hub vent	17½	27½	38½	50	63	25	34	36	43½	46	48½	55	57½	60	61½
P. trap with hub vent	13½	21½	31	41	52½	20½	28½	29½	37½	39	40	48½	50	51	52
3/4 S. trap with hub vent	14	22½	33	44	56½	21½	30½	31½	40½	42	43	52½	54	55	56
S. trap with hub vent	14¾	24	35	47	60½	23	32½	33½	43½	45	46	56½	58	59	60

1/8 bend offset	2x 2	7	3x 2	10¼	4x 2	13¾	5x 2	17¼	6x 2	21					
1/8 bend offset	2x 4	8¼	3x 4	12	4x 4	16¼	5x 4	20½	6x 4	24½					
1/8 bend offset	2x 6	9½	3x 6	14	4x 6	18¾	5x 6	23½	6x 6	28					
1/8 bend offset	2x 8	10¾	3x 8	15¾	4x 8	21	5x 8	26½	6x 8	31½					
1/8 bend offset	2x10	12	3x10	17¾	4x10	23½	5x10	29½	6x10	35½					
1/8 bend offset	2x12	13¼	3x12	19½	4x12	26	5x12	32½	6x12	39					

BOARD OF APPEAL—BUREAU OF BUILDINGS

ELECTRICAL DIVISION

December 1, 1915, to December 1, 1916.

The following is the report of the Board of Appeal:

Regular meetings held	5
Special meetings held	3
Appeals considered	6
Appeals granted	6
Appeals denied	0
Appeals withdrawn	0
Appeals under consideration	0

The following general rulings and recommendations were made:

RULINGS

December 15, 1915:

That metal moulding may be installed as conduit in the Inner Fire Limits, in compliance with the provisions of Sections 48 and 51, where used as extensions to existing circuits, but must not be used in theatres under any conditions.

January 21, 1916:

That single braid wire will be permitted as called for under the following paragraph, which is taken from Rule 26-(n) of the 1915 National Electric Code:

"For Conduit Work:

Must have an approved rubber insulating covering, and within the conduit tubing must be without splices or taps. Must be double braided (Type Letters R. D.) for twin, twisted or multiple conductor cables, and for all single conductors of No. 6 B. & S. gage and larger.

"Slow burning insulation may, however, be used in permanently dry locations where excessive temperatures are present, provided special permission in writing be given in advance."

Provided, that in all cases it shall be installed in accordance with the table on conduit sizes as given in Rule 28-(i) of the 1915 edition of the National Electric Code.

January 25, 1916:

Section 45-(d3a). That 1 watt per square foot be changed to ¾ watt per square foot; and that ¾-watt per square foot in guest rooms of hotels and detention buildings be changed to ½-watt per square foot; that 3-10-watt per square foot in storage rooms, etc., be changed to 1-5-watt per square foot. In paragraph (b), that the minimum of 25 watts per lineal foot of show window exposure be changed to 15 watts per lineal foot.

In Section 45-(d4), that the wattage per square foot for dwellings, flats and apartment houses be eliminated and that the circuit capacities be controlled by requiring that no more than eight roughing in lighting outlets be allowed on any circuit.

Neither of the foregoing recommendations, however, affects the wattage capacity required for base plugs and floor outlets, which still remain at 100 watts each.

The Board further recommends that where portions of rooms listed under Section 45-(d4a) are desired to be illumined for specific purposes, the wattage capacity for outlets for that portion of the room shall be determined by dividing the square of the average distance

between the outlets by the number of outlets required. The number so obtained shall be used to represent the number of square feet on which the wattage capacity shall be estimated in accordance with the occupancy of the room.

March 16, 1916:

Section 45-(d4). For dwellings, flats and apartment houses the minimum number of watts required per outlet shall be as follows:

Ceiling oulets in living rooms, dining rooms, parlors and libraries	160 watts each
Ceiling outlets in kitchens, bedrooms and dens	80 watts each
All bracketed outlets	50 watts each
All other lighting outlets	40 watts each

August 15, 1916:

Decision passed allowing the use of two No. 12 single R. C. wires in ½-inch pipe, irrespective of length. Two No. 8 wires, either single or double braid, in ¾-inch pipe, irrespective of length. Three No. 8 wires, either single or double braid, in ¾-inch pipe, up to and including 30 feet and not more than two bends.

August 15, 1916:

Decision passed allowing the use of series wound D. C. motors on small air compressors to be operated without starting boxes, providing the motor is so designed as to start with a low current capacity.

RECOMMENDATIONS

RE-INSPECTION

The Board recommends that some method of re-inspection of existing buildings at stated intervals be adopted by the City as a preventive measure against incompetent work being done.

PERMIT FEE

Installations on which the cost of labor and materials is $5 or less. Section 15-b of Ordinance No. 31793. The Board recommends that this paragraph be amended to read:

"If the cost of labor and materials on any installation does not exceed five ($5) dollars, no fee for the permit shall be demanded; provided, however, that where permit is not procured within 24 hours of commencing the installation, the minimum fee of fifty (50c) cents shall be charged for such permits."

REGISTRATION OF SUPERVISING ELECTRICIAN

It is recommended that the second sentence of Section 9 be amended to read as follows:

"In addition the affidavit shall contain the statements of two responsible persons, who have had at least four years' practical experience in the installation, alteration and repair of electrical equipment for light, heat or power, and who are at present actively engaged in electrical installation work, to the effect that they know the applicant has had the four years' experience as required, and that they believe him to be qualified to perform such electrical work as is controlled by this Code."

EXEMPTION FROM ELECTRICAL CONTRACTORS' FEE

The Board of Appeal suggests, that in view of the fact that the present license fee required of electrical contractors seemingly works an injustice upon certain institutions of the City which maintain a

regular electrician to do their work, said section be amended so as to permit establishments regularly maintaining a competent electrician to do wiring in or on their own building or property for their own purposes or use only, without the payment of a license fee; provided, however, that this shall in no way permit them to do any wiring whatsoever outside of their own establishments; provided, further, that their electrician shall be a regular licensed supervising electrician, and providing that this shall in no way act to exempt said persons from any provision of the ordinance except as specifically set forth in this section.

The words "establishments regularly maintaining a competent electrician" shall mean "persons" as defined by Ordinance No. 31793 of the City of Portland, Oregon, not regularly engaged in the installation of electrical wiring or apparatus, who can show conclusive evidence that they have in their employ a competent electrician who is engaged by them by the year for the purpose of maintaining their installation. This exemption shall in no way apply to persons who engage an electrician (whether by the day, the month or by the year) to do certain work for them, who discharge him after its completion and who fail to maintain a competent electrician in his place thereafter. Such action on the part of such "persons" shall be construed as an act of breach of faith on their part in applying for the exemption offered in this section, the regular license fee shall automatically become due for the work already done and the Electrical Inspector shall take immediate steps necessary to collect same.

ELECTRIC SIGNS

The Board realizes that the only object the City can have for permitting the erecion of signs over the streets and walks is that they shall in some way contribute to the benefit of the general public. This they can do in two ways: First, by assisting materially in the lighting of the streets; and, secondly, by being attractive, thereby contributing to better business conditions as well as to the good taste of the local public and the favorable impressions made upon the traveling public. When a sign ceases to functionate in these aspects, its usefulness ceases, insofar as the municipality is concerned, and usually insofar as the owner is concerned also.

The first requirement is met by our present Ordinance No. 31793, Section 2, but the second requirement is not provided for as yet. There is a general demand for some action along these lines in the more progressive cities of the country and in some places this feeling has crystalized into something definite. The Board realizes that it is a difficult matter to frame any ordinance that will adequately care for the second class of requirements, as set forth above, but feels that some definite progress might be made along this line by adopting an amendment to the present sign ordinance similar to the following:

Every sign erected or maintained within the fire limits of the City of Portland must be passed upon by the Art Committee established by the City Commissioners, with the distinct understanding that signs as such are not objectionable but are desirable in this City at the present time and must be judged only in accordance with the following general restrictions:

They must be attractive in appearance.

They must not contain objectionable reading matter or representations, and must not be objectionable monstrosities in themselves.

They must be repainted and repaired so as to be kept in first class condition at least every two years and oftener if the appearance becomes such as to make them unsightly or the structural condition is such as to make them unsafe.

They must be lighted on both sides unless attached against the side of the building.

There shall be a minimum amount of candle power per square foot of surface required on all externally lighted signs, and a minimum percentage of the total area of lens or prism signs must be occupied by the lens or prisms, and such signs shall be limited in size. Where prisms or lens are desired on larger signs, they must be used in connection with visible lamps, that is, a portion of the sign must be outlined with lamps and the balance may be completed with lenses or prisms.

The Board suggests that transparencies shall be limited in regard to the total area of glass used in proportion to the balance of the sign, also in regard to the maximum dimensions of the glass in any given direction. There shall also be minimum requirements in regard to the character and thickness of the glass used.

REPORT OF OPERATIONS OF THE BUREAU OF SURVEYS AND DRAFTING FOR THE FISCAL YEAR 1916

ORGANIZATION

Work during the year was carried on in about the usual manner. The scope of operations includes surveying, drafting, computing, street extensions, acquirement of deeds, rights of way and easements, etc., and a large amount of miscellaneous work is handled that can hardly be classified. The work is divided among the following divisions in the bureau: Surveys, Drafting, Street Extensions.

SURVEY DIVISION

This division handles all of the survey work of the department, except that required for the Bureau of Sewers, and also (since last winter) that required by the Bureau of Grade Separation.

The survey work is of two kinds: (1) **Routine,** comprising the ordinary operations having to do with street lines and grades, street improvements, street extensions, platted additions, etc., and (2) **Special Surveys,** dealing with special surveys on a large scale for general purposes and not connected with any particular projects.

To carry on the routine work, the city is divided into three survey districts, the portion west of the Willamette River and the two portions on the east side thereof separated by the south line of East Glisan Street. The District Surveyor handles the preliminary details connected with the different street improvement plans and estimates, the staking out for construction, and the making of all measurements for estimates, besides the miscellaneous survey work, and he has a survey computer as an office assistant.

The amount of survey work during the year cannot be expressed in any practicable unit of measure. To give some indication, however, the following table was compiled to show the amounts, expressed in lineal feet, of the different kinds of routine work handled by the district survey parties. Additional work, consuming much additional time, cannot be definitely expressed by any unit of measure except the absolute time taken, so that it is not given in the table.

WORK DONE BY DISTRICT SURVEY PARTIES DURING 1916

Nature of Work	Length in Feet
Cross-sections	146,700
Grading stakes	47,000
Finishing stakes for grading	24,200
Sidewalk line and grade stakes	170,000
Gutter grade points for pavement	67,500
Profile levels	231,000
Street extension surveys	36,800
Looking up points for and retracing street lines	322,000
Miscellaneous survey work	222,000
Measuring up contract work done	46,000
General levels	67,000
Profile levels for sewer	650
Line and grade for sewer	700
Precise levels	6,350
Resurveys	111,700
Stadia topography	4,200
Subgrade points set	3,400
Traverse line	328,500
Triangulation	2,800

The above table does not include any part of the special surveys hereinafter mentioned, made for rehabilitation of the street monument system.

A few notes on the nature and volume of work handled in each of the three survey districts will be given:

(1) **West Side**—As might naturally be expected, but little original street improvement work is nowadays done on the West Side, that is, nearly all of the streets that are being improved have been graded before. Not one single job involving grading and sidewalks alone has been completed during the fiscal year. There have been ten paving jobs and three macadam jobs accepted; contracts have been let for two paving jobs and one grading and sidewalk job; estimates have been filed but contracts not awarded for one paving job and two macadam jobs; proceedings were carried to the point of remonstrance by property-owners for two quite complicated paving jobs; and work was done so that estimates were partially prepared for three or four other jobs, but which were discontinued for various reasons.

In the way of general surveys a very large amount of work was occasioned by the extensive slides that occurred in the hills section during February. Besides detail surveys connected with correction of the slides there was made an elaborate topographical survey of the Willamette Heights region that might be considered as tributary to the large slide that occurred on Thurman Street. The slides were probably the most extensive that have ever occurred in Portland.

During the year a complete traverse survey was made along the St. Helens Road from Twenty-sixth and Raleigh Streets to the west boundary line of the old town of Linnton, a distance of 7.5 miles. All important land lines and considerable portions of the platted additions lying along and above this road were connected with the traverse survey. These surveys are used by the Drafting Division in platting the new one-quarter section sheets which are being extended over the Linnton annexation. A re-survey was made of Section 8, T. 1 S., R. 1 E., embracing the Council Crest territory, and the work has since been continued to the eastward.

In Seventh Street Terraces in South Portland a very large amount of survey and office work has been done in determining the location of the streets, also in running profile levels and in contouring the hillside, all necessary for projection of future street work.

Many of the platted additions on the West Side were either poorly surveyed or not permanently marked, so that much patient work is often required in retracing and adjusting the addition lines.

(2) **Southeast District**—Not much time for miscellaneous survey work was available in this district, but a considerable amount of work in retracing and remarking old land lines was done. The largest street extension survey was that for extending East Twenty-sixth Street from Raymond Avenue southerly to Bybee Avenue in Eastmoreland, as the need of an additional artery for reaching this section is felt. A start was made on the City Boundary Survey and about two miles were run.

(3) **Northeast District**—Aside from the routine improvement work the two principal surveys worked on in this district were as follows:

(a) A system of traverse lines covering the recently-annexed St. Johns section. These traverse lines serve as a framework so that the streets and additions in the area covered could be tied in correctly.

A distance of 21.7 miles was thus run, and the retraced points were marked.

A level survey of the St. Johns territory has also been made. Levels were taken on all of the cement curbs and corners, and the elevations were put on white prints, and from these in time we will prepare an ordinance re-establishing the grades to conform to the datum of elevations used by the City of Portland. Profile levels were also run and platted for a number of the unimproved streets. The work is now in such shape that any street improvements that might come up can be easily handled.

(b) The City Boundary Survey was begun at East Ninety-second and East Glisan Streets and run north and westerly as far as East Thirteenth Street, a distance of about 8½ miles. The distances are being carefully measured and the angles are being turned with as much precision as obtainable with the City instruments.

The City Boundary Survey is a work of some importance, as the actual determination and permanent marking of it give survey points and information of value in our routine work, but the primary aim is to fix the location for substantial concrete boundary posts that are to be set by this department. This work was finished on the West Side last year, and it is expected that the survey and planting of the monuments for the entire East Side will be finished by the spring of 1917.

In volume of street improvements, the Northeast District has handled over one-half of the paving jobs and nearly two-thirds of the sidewalk and grading jobs during the year, measured in cost or length. The remainder of the paving work has been about equally distributed between the West Side and the Southeast District. Most of the macadam improvements have been made in the latter two districts, with only a small amount in the Northeast District. No grading and sidewalk jobs were finished at all on the West Side.

STREET MONUMENT SURVEY

This survey continued during the early part of the year in "Nob Hill District," known for convenience as District No. 4, and reaching from Sixteenth Street to Washington Park and from Jefferson Street to Washington Street. On completion of this district, work was transferred to District No. 5, embracing all of the section in which monuments were previously set and practically covering the hillside above Macadam Street from Hall Street southward to Hamilton Avenue.

During the season a large additional amount of work was done in connecting districts 1 and 2, because of the angle in the neighborhood of their junction occurring in the neighborhood of Ankeny and Burnside Streets, the acute intersections requiring detailed work to establish all of the angle points and intersection distances.

The end of the year finds the monument survey party still engaged in District No. 5.

The work on this survey consists in a very precise determination of the correct monument lines, the finding the errors in actual position of the old monuments, the permanent marking on cement sidewalks and curbs of certain auxiliary points at even distances from the property lines, so that these points can be used in lieu of monuments, and they are much more convenient.

The Bench Level Survey and the tabulation of same were completed during 1915, so that no field work and only incidental office work

were performed during the fiscal year. The complete tabulated lists with explanatory notes were sent to the printer in the fall of 1915, and on January 15 of this year were received the printed booklets in full. This publication is believed to be the most elaborate, probably, of the kind in this country. The booklet contains 141 pages, the issue consisting of 350 in bound form and 350 in loose-leaf form, and the cost of the printing was $245. A concise description and the elevation of each of over 2,000 permanent benchmarks are given. A detailed description of the Bench Level Survey, covering all phases of the work and including illustrations and statement of the cost, was published in the Engineering News of July 13, 1916.

STREET EXTENSION DIVISION

This division has charge of matters concerning the opening, widening or extension of streets, the securing of deeds, rights of way, etc., required for streets and sewers, and also the securing of easements for sloping embankments onto private property and the drafting and execution of necessary waivers relating to street improvements, etc.

Proceedings for street extensions during the year continued under the two alternate methods, the "Ordinary Method" and the "Aditional Method." Street extensions and new streets were also made by securing deeds directly from the owners, and there is also the process known as "taking over county roads," by which the jurisdiction over certain highways is transferred from the County to the City Government without any change in the lines thereof.

The following table gives a full list of the street extensions completed during the year by the two methods of condemning, those made by direct deeds, and the new city streets created merely by taking over of county roads. The table also covers the one case where the method was changed. In the list of "Pending Proceedings" are all of the extensions for which authorization has been given by the Council to proceed, but in most of which the final opening of the streets cannot be accomplished for some time yet.

Procedure under our present charter is very difficult indeed, and the City is badly handicapped in condemning land for street purposes.

Among the street extensions that have been attempted in times past is that of Carey Boulevard, extending along the southerly side of the S. P. & S. Railway cut from Willamette Boulevard to Walker Street. A complete map showing all intersections worked out and the areas to be taken was prepared several years ago, but no report was ever filed. The railway company deeded all it could, but a number of intervening fractional parcels of land must be acquired before the street is completely opened.

Among the important projects handled by the Street Extension Division is that covering the vacating and replatting of Hudson's et al Additions. This involves the complete revision of the street systems for an area of about 40 acres. It is hoped that next year will see the final accomplishment of this project, but deeds from a number of property-owners have yet to be secured. The plan is certainly a good example of scientific remodelling of a city, by which the bad blunders made in the original lay-out may be corrected.

This division has had charge of the work involved in securing the land required for viaducts and earth-work approaches for the elimination of grade crossings over the O-W. R. & N. Company's

tracks. Besides the acquisition of land, is involved the securing of easements to slope the approach embankments onto the adjacent ground. The division also handled the detail work in connection with the vacation of East Fifty-second Street and East Fifty-fifth Street across the railway right of way.

A large amount of miscellaneous work was necessarily performed during the year in connection with the different projects in which the City is concerned. The following table gives an idea of this work, the items of which are not a part of street extensions:

INSTRUMENTS PREPARED AND SIGNATURES SECURED

Kind of Instrument	No. of Instruments	No. of Signatures Secured
Deeds of dedication	17	39
Rights of way for sewers	5	8
Easements for sloping embankments	11	26
Waivers, petitions and agreements	22	75
Totals	55	148

STREETS EXTENDED, WIDENED, CHANGED OR TAKEN OVER

Name of Street	Limits	Length in Feet	Reference
	BY "ORDINARY METHOD"		
Kline St.	Patton Rd. east and south to S. L. Sec. 4.	300	Res. No. 9921
Halsey St.	West from E. 1st St. through Block 31, McMillen's Addition	97	Circuit Court
	BY "ADDITIONAL METHOD"		Ord. No. Initiating
E. 45th St.	Halsey St. to Broadway	465	30534
58th St., S. E.	29th Ave., S. E. to Division St.	1360	30432
Powell St.	Milwaukie St. to E. 19th (assessment not collected)	1925	29957
	BY SECURING DEEDS OF DEDICATION		Ord. No. accepting
6th St.	Lot 20, Block 28, Carson Heights	99.33	31304
Gilbert St.	S. L. Union Square to S. L. Central Ave.	1100	31732
E. 73rd St.	N. L. Hawthorne Ave. to N. L. Clinton Add.	100	31249
Holland St.	West line of E. 9th St. to 220 feet east	220	31433, 32140
Gresham St.	Polk St. to Tyler St.	300	31882
E. 63rd St.	Thorburn Ave. to 225 feet north	225	31749
	BY TAKING OVER COUNTY ROADS		Ord. No. taking over
Patton Road	E. L. Georgian Court to 210 feet west of Greenway	1250	31431
Halsey St.	E. 60th St. to E. 82nd St. and easterly along O.-W. R. & N. Co. right of way	6300	31018
E. 82nd St.	Clackamas St. to Broadway	840	31017
E. 28th St.	Schiller St. to south line Steele Ave.	1268	31225
Willamette Blvd.	Ida St. to Richmond St.	3425	31929
	PROCEEDINGS DISCONTINUED		
	Proceedings for the extension of Benton St. through Block 54, McMillen's Addition by the "Additional Method" were discontinued. New proceedings were initiated by the "Ordinary Method," the City Engineer's report was prepared and filed with the Auditor, but these proceedings were discontinued also.		
	PENDING PROCEEEINGS		Ord. No. or Res. No. initiating
	Proceedings are pending for the extension, widening or change of the following streets, Dec. 1, 1916:		
Madrona St.	Blk. 1, Woodlawn, to Dekum Ave. (assessment collected)	600	30815
Washington St.	Lownsdale St. to 16th St. (assessment collected)	200	30367
E. Burnside St.	E. 44th St. to E. 55th St. (assessment prepared).	2420	30910
E. Burnside St. and Gilham Av.	E. 63rd St. to E. 69th St. and Thorburn Ave. (assessment prepared)	1825	30909
Oregon St.	East line of York to E. 29th St. (assessment made)	91	31125
Greeley St.	Killingsworth Ave. to Russell St. (Auditor to prepare assessment)	9810	30788
Bancroft Ter.	Terwilliger Boulevard to Bancroft Ave.	1050	9389
	A report was prepared for the extension of E. 26th St. from Raymond Ave. to Bybee ave., but was not filed with the City Auditor.	5000	9400

DRAFTING DIVISION

This division is composed of the Drafting and Computing Branches. The service performed includes that ordinarily assigned to drafting rooms and in addition quite a variety of miscellaneous and clerical work. This division has not during the past year handled the drafting work of the Bureau of Sewers nor that of the Bureau of Grade Separation, and most of the designing for structures involved in street improvements has been done by the Bureau of Highways and Bridges before the final drafting in finished form by this division.

One of the most important lines of work is the keeping up to date of the one-quarter section sheets covering the city, there being at present over 200 of these sheets, drawn on a scale of 100 feet to the inch. As settlement is extended over new territory in the city and as annexations take place, additional one-quarter section sheets have to be made. Much more care is used in this work than formerly, as it was concluded that the errors in platted additions should be determined in advance so that the correct figures (alongside the recorded figures) could be entered at once on the maps. The annexations of St. Johns and Linnton, effective in July, 1915, increased greatly the territory and the number of additional maps required.

The expansion of the system of numbering the one-quarter section sheet maps (each one covering one-quarter section of land) has been such that the scheme is now totally inadequate, as not only is there great lack of continuity in the numbering in any region, but we have been compelled in the westerly part of St. Johns and in Linnton to substitute letters for numbers to designate the sheets, and the lay-out already planned requires more letters than are in the alphabet. Three comprehensive alternate schemes of renumbering the sheets have been proposed, each one looking to a greatly enlarged city area, and it is probably that one of them will be adopted during the year 1917.

Among other important kinds of work handled during the fiscal year were the following:

(1) A large topographical map of the territory surrounding the Thurman Street slide was platted and finished up in complete shape, being drawn on mounted paper.

(2) This division always checks up the maintenance bills rendered to the City by the different paving contractors who have paving under maintenance. During the year 182 contractors' maintenance bills were thus checked and compared with the final estimates made at time of completion of the pavements. As the contract maintenance is decreasing from year to year, the number of bills turned in is also decreased.

(3) During the year 275 bids covering 68 street improvements were checked and tabulated. The present forms for estimates, proposals and tabulation sheets have simplified the tabulation and made more regular the bids, largely as a result of the numbered lines used.

(4) Work has continued on the "Street Acquirement Maps" during the year. The present work includes correcting and bringing up to date of the work formerly done, as the changes occur, and also the extension of this work over the new sheets made for St. Johns and Linnton and other territory. Nearly all of the sheets completed by the Municipal Engineer in his search for data have now been tinted, and the pencil notes made by the Engineer on the maps are being inked in by the draftsmen as time is found.

(5) The most important new work inaugurated in the Drafting Division was the preparation of a series of underground maps, the plan being to eventually cover the entire city. These maps are to represent all underground structures found within street limits. The work has been long deferred, but a definite start was made in September. One draftsman, and for a portion of the time two draftsmen, have been continuously at this work.

The congested district on the west side of the Willamette is being platted first. This district reaches from the harbor line to 100 feet west of Fourteenth Street, and from 100 feet south of Jefferson Street to 100 feet north of Burnside Street. The size of sheet selected for this district is 20 inches wide by 15 inches high and the scale is 20 feet to 1 inch. This allows one intersection and out to the center of an ordinary block in each direction from the intersection, and 195 sheets are required for the district. It is planned to file these sheets in a vertical file, arranged alphabetically under the names of the east and west streets, the intersections with the numbered north and south streets to follow in numerical order under each named street as taken up.

All the sheets in this district have been blocked out and all surface structures, such as sidewalks, curbs, railway tracks, manhole and other covers, have been platted on the sheets.

(6) The Chief Draftsman has for several years done the principal work connected with the preparation of forms for official city business. This work is done for the Forms Committee, composed of three city officials. The Chief Draftsman during the year wrote the specifications for printing 153 new or revised forms and passed upon 191 forms for reprinting. Since April he has also made out the Forms Approval Blanks.

(7) A system of making weekly progress reports on street improvement proceedings where the plans and estimates have not yet been filed was inaugurated during the year. On the printed form devised are entered the data as to the successive steps in the preparation of plans and estimates from the beginning of the proceedings. This system is of great value because there is represented at the end of every week a concise statement in tabular form of the progress of each improvement proceeding, so that the responsibility for delays in the successive steps can be placed.

(8) Along with the mechanical lettering of many of the drawings on the Title Press has been the printing of many small forms used in the department for all kinds of purposes. These include index cards, reports, etc.

(9) The work of the Computing Branch is primarily that for making the preliminary and final estimates on street improvements and the final estimates on sewer improvements. In addition to this many tentative estimates and investigations are made to determine the advisability of making improvements, and a considerable amount of statistical work is also performed. The improvement maps are made by the Drafting Branch under close co-operation with the computers.

This division keeps practically all the records in this department pertaining to street improvements, and so full are these records that citizens as well as city officials and those in the department are constantly calling at the Chief Draftsman's office for information of all kinds as to improvements. Summaries of all the different features of street improvements are given in the following tables.

Table 1 gives the length in miles of the different kinds of street improvements in Portland in place on December 1, 1916.

Table 2 gives the cumulative cost of street improvements since 1865.

Table 3 gives the nature and amount of street improvement work done during the fiscal year.

Table 4 gives the totals (in cost) of street improvement work accepted during each month of the year.

Table 5 gives the cost of street improvements awarded or contracted during each month of the year.

Table 6 gives the range of unit prices for paving during the year.

Table 7 is a summary of the number and cost of the street improvement and sewer jobs on which the Computing Branch made estimates during the year.

Table 8 gives the number and estimated cost of the different kinds of street improvements for which proceedings were discontinued during the year, for the various reasons noted. The year is divided into two halves. No conclusion can be drawn from the excess in the last one-half year, which has a larger proportion of the more complicated improvements because of delay in filing the plans and estimates.

W. P. HARDESTY,

Chief, Bureau of Surveys and Drafting.

TABLE 1

LENGTH IN MILES AND MATERIALS OF ROADWAY IN THE CITY OF PORTLAND IN PLACE DECEMBER 1, 1916

Kind of Improvement	In Place Dec. 1, 1915	Completed During F. Y. 1916	In Place Dec. 1, 1916
Asphalt	107.574	.....	107.574
Asphaltic Concrete	19.174	1.1938	20.3678
Asphaltic Conc. Redress	4.45	.....	4.45
Bitulithic	109.982	4.6134	114.5954
Bitulithic Redress	5.89	1.0628	6.9528
Bituminous Macadam	.15	.....	.15
Concrete	26.447	1.8494	28.2964
Granitoid	.37	.....	.37
Gravel Bitulithic	37.395	.1765	37.5715
Hassam	47.763	.8078	48.5708
Stone Blocks	9.387	.2792	9.6662
Stone Block Relay	.....	.0222	.....
Vitrified Brick	1.312	.5201	1.8321
Westrumite	1.58	.....	1.58
Wood Blocks	2.29	.....	2.29
Total Hard Surface	373.764	10.5252	384.2670
Elevated Roadways	.54	.....	.54
Graded (earth grade)	282.326	4.1417	286.4677
Gravel	83.19	.....	83.19
Macadam	56.495	1.6883	58.1833
Plank Roadway	.80	.....	.80
Reinforced Concrete Bridge	.16	.....	.16
Steel Bridge	.37	.....	.37
Total Miscellaneous	423.881	5.8300	429.7110
Grand Total	797.645	16.3552	813.9780

TABLE 2

CUMULATIVE COST OF STREET IMPROVEMENTS

Cost of street improvements (Dec. 1, 1915 to Dec. 1, 1916)	$ 475,947.60
Total cost of street improvements (1865 to Dec. 1, 1915)	31,821,009.44
Total cost of street improvements (1865 to Dec. 1, 1916)	32,296,957.04

TABLE 3

SHOWING STREET IMPROVEMENT WORK DONE DURING FISCAL YEAR 1916, FROM DECEMBER 1, 1915 TO DECEMBER 1, 1916

Kind of Improvement	Length in Miles	Total Cost including 5% for Eng., Adv. and Inspect.
Asphalt		
Asphaltic Conc. on Conc. Base	.6220	$ 33,714.48
Asphaltic Conc. on Bitum. Base	.3718	11,579.10
Bitulithic on Cr. Rk. Base	4.6134	173,458.53
Bitulithic Redress	1.0628	22,048.41
Concrete	1.8494	63,756.26
Gravel Bitulithic	.1765	4,436.32
Hassam, Class "A"	.4584	15,400.61
Hassam, Class "B"	.3494	9,258.21
Stone Blocks	.2792	30,719.90
Stone Block Relay	.0222	1,840.93
Vitrified Brick	.5201	32,510.42
Total Hard Surface	10.5252	$398,723.17
Macadam	1.6883	36,323.58
Graded (earth grade)	4.1417	40,900.85
Total Miscellaneous	5.8300	77,224.43
Grand Total	16.3552	$475,947.60

TABLE 4

TOTAL AMOUNT STREET IMPROVEMENTS ACCEPTED DURING FISCAL YEAR 1916

Month	Pavement		Grading and Walks		Macadam	
	No.	Cost	No.	Cost	No.	Cost
December	4	$ 57,899.01	2	$ 3,058.64	1	$ 10,224.18
January	1	15,465.83				9,606.13
February	1	10,012.22				
March	1	1,493.04	1	2,771.71		
April	3	19,462.85	2	3,239.40		
May	3	8,720.52	3	3,695.33		
June	2	5,549.18	1	1,718.58	1	1,127.79
July	7	58,469.35	2	1,080.97	1	5,339.77
August	9	40,624.53	3	9,905.01	1	1,268.94
September	5	54,026.82				168.63
October	5	45,756.51	1	2,461.42	1	4,607.44
November	8	81,243.31	5	12,969.79	1	3,980.70
Total	49	398,723.17	20	40,900.85	6	36,323.58

Total, 3 classes, $475,947.60.

TABLE 5

CONTRACTS FOR STREET IMPROVEMENTS AWARDED DURING FISCAL YEAR 1916

Month	Pavement		Grading and Sidewa'k		Macadam	
	No.	Contract Price by Preliminary Estimate	No.	Contract Price by Preliminary Estimate	No.	Contract Price by Preliminary Estimate
December	2	$ 7,529	3	$ 4,217	.....	.....
January	4	77,113	1	951	.....	.....
February	3	23,066	3	48,585	.....	.....
March	.....	.....	1	595	1	1,069
April	3	12,890	.....	.....	1	813
May	3	17,950	2	4,638	.....	.....
June	5	54,937	2	861	.....	.....
July	5	40,527	1	6,173	1	3,151
August	3	31,757	2	3,061	.....	.....
September	2	2,189	3	4,839	.....	.....
October	7	29,310	3	2,616	.....	.....
November	3	5,523	.....	.....	.....	.....
Total	40	$302,791	21	$76,536	3	$5,033

Total in contracts awarded, $384,360.00.

TABLE 6
UNIT PRICES FOR FISCAL YEAR 1916

Kind	Square Yards	Unit Prices			Remarks
		Maximum	Minimum	Average	
Asphalt					
Asph. Conc. on Concrete base	18,313.4	1.35	1.30	1.317	
Asph. Conc. on Bituminous base	6,204.3	1.16 2/3	1.16 2/3	1.16 2/3	
Bitulithic on Crushed Rock base	95,226.9	1.75	1.15	1.337	
Bitulithic Redress	17,917.1	1.25	.95	1.038	
Concrete	22,237.2	1.26	1.15	1.208	
Gravel Bitulithic	2,566.1	1.30	1.30	1.30	
Hassam, Class "A"	9,176.5	1.35	1.25	1.319	
Hassam, Class "B"	5,807.8				
Stone					
Vitrified					
Total Hard Surface in Roadway	181,604.0				
Macadam in Roadway	*6,535.8	3.25	2.00	2.707	Unit price per cu. yd.
Portion in Track—					
Stone Block	3,857.7	3.50	2.58	3.414	
Stone Block Relay	625.2	2.00	2.00	2.00	
Vitrified Brick	9,823.1	3.00	2.00	2.326	
Total in Track	14,306.0				
Portion in Central Strip—					
Concrete	9,307.6	1.30	1.20	1.206	
Vitrified Brick	907.3	3.25	3.00	3.135	
Macadam	*96.0	3.00	3.00	3.00	Unit price per cu. yd. Mac.
Shoulders—					
Macadam	*234.0	.75	.75	.75	Unit price per cu. yd. Mac.
Grand Total Hard Surface	206,124.9				
Grand Total of Macadam	*6,865.8				

*Macadam is given in cu. yds.

TABLE 7
COMPUTERS' WORK ON STREET AND SEWER ESTIMATES
FOR FISCAL YEAR 1916

Nature	Preliminary			Final		
	No.	Est. Cont. Cost	Mileage	No.	Final Cost Plus 5%	Mileage
STREET IMPROVEMENT						
Prel. Estimates	69	319,418.00	12.183			
Prel. Permits†	3	3,095.00	0.159			
Final Estimates				75	475,947.60	16.355
SEWER IMPROVEMENTS						
Final Estimates				28	221,462.00	*14.724

*Does not include sewer in E. Alder St., which was worked up in Bureau of Sewers.
†Permits have not as yet been issued—work has been practically completed on all three as listed.

TABLE 8

STREET IMPROVEMENT PROCEEDINGS DISCONTINUED DURING FISCAL YEAR 1916

Name of Street	DURING FIRST SIX MONTHS			
	Kind of Improvement	Estimat. Cont. Cost	5% for Engineer etc.	Why Discontinued
E. First St.	Hard surf.	$ 3,218.00	$161.00	Dif. selection of pave.
Lucky Ave.	Grad., w. and curbs			Change limits of imp.
17th St.	Macadam	2,156.00	108.00	Change limits of imp.
Ankeny St.	P. rdy., c. w.	3,843.00	192.00	Alter plans and estimates.
Sandy Blvd.	Hard surf.			Alter outlines of imp.
E. Glisan St. et al.	Hard surf.	5,453.00	273.00	Des. of ass. dist. incorrect.
Woodstock Ave.	Hard surf.			Ass. val. too low to cover cost.
Broadway	Hard surf.			To be included in Dist. imp.
Broadway	Hard surf.			To be included in Dist. imp.
E. 73rd St.	Grad., w. and curbs			To be included in Dist. imp.
Cardinell Drive	Macadam			Remonstrance.
E. Glisan St.	Hard surf.			Limits to be extended.
E. 8th St.	Hard surf.			Limits are indefinite.
Holgate St. and 45th Ave.	Grad., w. and curbs			Pet. incorrect; name is "Holgate St."
31st St.	Macadam			Alter proceedings.
E. Morrison St. et al.	Grad., w. and curbs			New pet. calls for hard surface pavement.

STREET IMPROVEMENT PROCEEDINGS DISCONTINUED DURING FISCAL YEAR 1916—Continued

Name of Street	DURING SECOND SIX MONTHS			
	Kind of Improvement	Estimat. Cont Cost	5% for Engineer etc.	Why Discontinued
E. 73rd St. et al.	Grad., w. and curbs			Owners desire Hawthorne Ave. to be omitted.
16th St. et al.	Mac. and wall			Imp. unnecessry North of N. E. line Heights Terrace.
Fern Ave.	Hard surface			Remonstrance.
Tacoma Ave. et al.	Hard surface			Location curb lines not decided. Assessed valuation too low.
17th St.	Hard surface	$ 1,323.00	$ 66.00	Remonstrance.
E. 27th St.	Grad., w. and curbs			Imp. not needed at present.
E. 27th St.	Grad., w. and curbs			Imp. not needed at present.
Holgate St. et al.	Grad., w. and curbs			Desired to fix East terminus at P. R. L. & P. Co.'s tracks.
E. 32nd St.	Hard surface			Clerical error.
Willamette Blvd.	Hard surface			Remonstrance.
Belmont St.	Hard surface	3,984.00	199.00	Remonstrance.
Broadway et al.	Hard surface			Assessed value too low.
E. 70th St.	Grad., w. and curbs	1,223.00	61.0	Remonstrance.
E. 73rd St.	Grad., w. and curbs	2,019.00	101.00	Remonstrance.
Haven St.	Walks and curbs			Error in description.
E. 45th St.	Hard surface			Property cannot be bonded for full cost.
Halsey St.	Grad., w. and curbs	973.00	49.00	Ground to widen was not deeded
College St.	Hard surface	23,177.00	1,159.00	Remonstrance.
E. Morrison St. et al.	Hard surface	6,905.00	345.00	Remonstrance.

BUREAU OF HIGHWAYS AND BRIDGES.

CONSTRUCTION DIVISION—FISCAL YEAR 1916

The amounts of the various classes of work performed in the improvement of streets under ordinance, are given by months in the accompanying table marked "A."

Under a change in the organization at the beginning of the year, all work connected with the repair of pavements was carried out under the supervision of the Maintenance Division, and a summary of the same is included in the report for that division. The Construction Division, as before, handled the work of erecting and repairing street signs, the number of new signs erected totaling 2270 each, and signs repaired 631.

The total amount of street improvement work was somewhat less than in the preceding year. Probably the most important single undertaking was the improvement of Broadway, from Larrabee Street to Union Avenue. This street forms the principal approach on the East Side to the Broadway Bridge, and its lack of hard surface pavements in the past curtailed to a large extent the use of this bridge, which is the newest and best equipped in the city. The improvement included a revision of the grades, which resulted in the reduction of the maximum grades from 6 per cent to approximately 4 per cent, the ruling gradient on the Broadway Bridge. An awkward projection, where the street makes a turn at Wheeler Street, was also eliminated, and the roadway was widened from East First Street to Union Avenue, the result being that this street now forms the most imposing and the best adapted for traffic of any of the bridge approaches within the city.

The construction work on this improvement evolved some unusual difficulties. The intersection of Broadway and Williams Avenue was lowered three feet. There are double tracks on both streets and it was necessary to maintain street car traffic on Williams Avenue continuously. Credit is due the contractor, the Oregon Independent Paving Company, for the efficient and expedient manner of carrying on the work, and to the Portland Railway, Light and Power Company, which handled the track work.

In addition to the Broadway pavement, several other street improvements were made during the year which form connecting links between previous improvements, or serve as connections with improved county roads, among these being the following:

Union Avenue from Bryant Street to Columbia Boulevard, this constituting one of the approaches to the new Interstate Bridge.

Sandy Boulevard from East Seventy-second Street to the city limits, forming a portion of the Columbia River Highway and connecting with the hard surface pavement laid by the county in 1915.

Bybee Avenue and East Thirteenth Street, connecting Milwaukie Street with the principal business street of Sellwood.

Bybee Avenue from East Twenty-second Street to Eastmoreland.

East Glisan Street from East Seventy-fifth to East Eighty-ninth Streets.

Holgate Street from East Eighteenth to East Twenty-fourth Street (not completed).

East Thirty-ninth Street from Woodward Avenue to Powell Valley Road.

Twenty-eighth, Upshur and Twenty-ninth Streets, connecting Thurman Street with the St. Helens Road. On the latter, however, there is still a gap of 700 feet on Nicolai Street, between the city hard surface and the county paved road.

It will be seen that although the total mileage of paving is not as great as in previous years, a considerable amount of the work was done on thoroughfares and is of benefit to the city as a whole.

MAINTENANCE DIVISION

The routine work of this division, consisting of the repair of macadam and gravel streets, repairs to block pavement, the replacing of wornout wooden crosswalks and the reshaping of earth roadways is shown by months in the accompanying table B, which also shows the average unit costs.

The amounts of pavement repairs by contractors and inspected by this division are shown by Table C.

These figures do not include work done by contractors under maintenance contracts, of which no detailed records are kept.

An unusual amount of work was thrown upon this division by numerous earth slides which occurred in the early part of February. 1916. These slides were the result of unusual weather conditions. There was an excessive amount of precipitation in the form of rain in the months of November and December, 1915. Soon after the 1st of January, freezing weather prevailed and continued with little break during the month, accompanied by a considerable fall of snow. This was followed about February 7th by warmer weather and rain, resulting in the ground becoming saturated with moisture and causing the slides above mentioned. They were not limited to any one district, but fills in all parts of the city, which had been stable for many years developed slides, resulting in portions of the streets being undermined and failing, and in other cases in the streets being covered by slides from banks above the same.

There were approximately 20 major slides, the most serious of these being the one that occurred on the lower side of Thurman Street, between Rugby Street and Gordon Avenue. This slide took place in a fill which was made at the time the street was graded—approximately 10 years ago. This fill started to slide out near its toe, later extending up until the street was carried out to the edge of the street car tracks. The loosened earth was so saturated as to become semi-liquid, which may be judged from the fact that the St. Helens Road, 400 feet distant, was covered with mud from the slide to a depth of some three feet.

Repairs were undertaken immediately, the first steps taken being to construct and place fascines of brush to prevent further material from flowing down upon the St. Helens Road. At the same time a deep drain was constructed on the upper side of Thurman Street, a considerable distance each side from the slide, in order to cut off the underground flow from the higher ground above Thurman Street. A sump was constructed to receive the discharge from these drains and a pipe to drain the same was run across Thurman Street, connecting with a drain laid in the bottom of the hole left by the slide. Other branch drains were connected into this and the whole discharged onto

solid ground some distance below the toe of the original fill. A pile and timber bulkhead was then constructed below the slide to support the toe of the fill made later. This consisted of two rods of 30-foot piling, spaced 15 feet apart. These were braced together and each row was sheathed on its upper side with 4-inch planking. A timber crib supported on piling was also constructed at the east (lower) side of Thurman Street, occupying the space between the curb and property lines. This crib was carried up to within two feet of the street grade and filled with loose rock and earth, the principal purpose of the same being to provide a solid formation, so that the pavement in the street could be replaced without delay. The space between the crib and the street-car tracks was also filled with crushed rock, the outer car track, which had settled somewhat, also being brought to grade. After the street was brought to grade, approximately 3500 cubic yards of earth were dumped over the cribwork in order to make the permanent fill. This was hauled in by motor truck and, after dumping, was wet with a hose sufficiently to cause it to form a proper slope.

The total cost of repairs occasioned by this slide, including the construction of drains and the replacing of the pavement, amounted to $18,577.72.

The remaining slides were repaired, in general, simply by filling in or removing earth as the case required. In the case of the slide on Montgomery Drive, oppossite Laurel Street, a toe wall set on bedrock was placed to catch the toe of the fill, this being necessary on account of the steepness of the slope.

The total cost of repairing the slides, aside from the Thurman Street slide, was $5373.77. In addition, it was necessary to maintain barricades to prevent accidents, for about eight months, the cost of this work totalling $878.82.

PAVEMENT MAINTENANCE

The bureau is still handicapped by the lack of a municipal repair plant. In the effort to take care of nesessary repairs to pavements under maintenance by the city, bids were called for in the early part of the year for the repairs of all asphalt pavements within a district comprising most of the West Side. The only bid received was for $1.78 per square yard for patches to the wearing surface only, and $2.65 per square yard for entire pavement. Aside from the excessive cost, this arrangement is unsatisfactory, in that it is only possible to have repairs made when convenient for the contractor to operate his plant. It is also necessary to have an inspector on the work at all times to keep track of the amount of work done, thus adding materially to the cost. It is hoped that during the coming year some sort of plant can be had which will enable the city to handle its own work of this character.

SIDEWALK DIVISION

Property having a frontage of 133,700 lineal feet, or 25.3 miles, was posted on account of defective sidewalks and curbs. 52,780 lineal feet, or 10.0 miles, of concrete sidewalk and curb were constructed under permit and inspected by this division. The following work was performed by the City sidewalk crews:

Square feet of concrete sidewalk	84,556
Lineal feet of concrete curbs	10,591
Total length	2.67 miles
Reconstruction of curved corners	94
Repairs to concrete pavements	187.7 sq. yds.

In addition, the sidewalk crews performed work as follows:

Repairing surface on sidewalks of East Twenty-eighth Street Bridge, which had become loosened from the concrete slab.

Extending curtain wall on Montgomery Drive wall.

Repairing sidewalk and expansion joint on East Twenty-first Street Bridge.

Constructing new retaining wall and reinforced concrete walks on Washington Street, between Lownsdale and Sixteenth Streets, made necessary by street widening.

Reconstructing retaining wall at Himes and Wapato Streets.

Constructing private concrete steps on Broadway, Ross and Williams Avenue in connection with the change of grade on these streets.

STRUCTURAL DIVISION

The most important single work handled by this division was the construction of the Holgate Street Viaduct over the tracks of the Southern Pacific Company, between East Eighteenth Street and East Twenty-fourth Streets.

An agreement was entered into between the City and the railroad company on Oct. 1st, 1915, under which the railroad company agreed to construct the viaduct and approaches, which, on compeltion, were to be turned over to the City, the City to maintain the same.

This agreement was reached after negotiations lasting for about two years were held. The plans finally adopted were prepared by the railroad company, based on preliminary plans made by the City.

The actual construction work was started on May 3, 1916, there being a considerable delay in the delivery of the structural steel. The work, aside from paving, was completed on Oct. 14. The paving was completed and the viaduct opened to traffic on Dec. 17. The viaduct consists of four steel through girder spans of 75 feet each, with a clearance of 22 feet over the railroad tracks. A roadway 27 feet 3 inches is provided, with two sidewalks each six feet wide. The end spans rest on plain concrete abutments, the footings of which rest on a stable gravel formation, approximately eight feet below the surface. The intermediate supports are structural steel columns resting on concrete pedestals, on gravel sub-foundation. There is an expansion joint, at the center of the bridge. The floor system of the bridge is composed of steel floor beams and stringers, with five-inch creosoted fir planking laid transversely to the center line. The steel work is designed to support a single-line car track, although there is no street car line on the street at this time and no rails were laid. The wearing surface is composed of a bituminous pavement three and one-half inches in thickness, composed of a one and one-half inch layer of asphaltic binder, and two inches of bitulithic wearing course. Gutters were formed in the pavement about six inches from the wood curbs by increasing the thickness along the curbs, this being done to prevent moisture running down along the joint between the pavement and the curb.

This form of floor is new and, as far as I know, has never before been used as part of a permanent structure. It has advantages over other types and will possibly prove to be an improvement over other forms on certain kinds of bridges. It combines the low cost, lightness and strength of the wooden deck, with a durable and smooth surface, which is water-tight if properly maintained, and this forms a protection

to the wood against decay and to the steel work against deterioration from moisture.

The approaches to the viaduct proper consist of gravel fills with concrete sidewalks and curbs and gravel bitulithic pavement in the roadway. The gravel was dredged from the Willamette River and hauled to the site by electric trains. Before the gravel fill was placed, the earth was compacted with a 10-ton roller.

The grade on the west approach is 4.97 per cent, and on the east approach 6.75 per cent, the latter being required to meet the established grade at East Twenty-fourth Street. The total cost of the viaduct is stated by the Southern Pacific Company to have been about $63,000.

Other work handled by this division included the following:

Plans and specifications were prepared for a reinforced concrete viaduct, retaining walls, etc., required in the proposed improvement of College Street from Twelfth to Sixteenth Streets. Also plans for retaining walls and other concrete work in connection with the following street improvements:

Seventeenth Street, Clifton to Jackson Streets.

Sixteenth Street, Heights Terrace to College Street.

Plans were prepared and the work supervised of the necessary reinforced concrete work in connection with the widening of Washington Street, between Lownsdale and Sixteenth Streets. An interesting feature of the work was the utilizing of the reinforced walk already in place in front of one of the lots. This was fifty feet in length and 12 feet wide. The walk was first raised by means of jacks and then put on pipe rollers, after which it was moved and turned into the new alignment by means of jacks, after which a new retaining wall and piers were constructed underneath the same for supports. This work was entirely successful and was done at a large saving in cost, compared with a new walk. Credit for the plan is due Mr. Wright, Assistant Engineer, in charge of this division.

Tentative plans and estimate for a concrete stairway in the alley extending from Parkside Drive to Marconi Avenue were prepared.

Preliminary studies were made of a bridge across the Willamette River at Sellwood to supersede the present ferry service.

Investigation was made of a defective concrete pier of the Hawthorne Bridge and report made thereon.

BRIDGE MAINTENANCE DIVISION

A wood stairway connecting Wapato Street and Fairmount Boulevard was constructed.

The private bridge on Ochoco Avenue, across Johnson Creek, was strengthened by trussing and new planking laid. This was paid for by the City and Clackamas County, jointly. Cribwork and bulkheads were constructed (except piling) in connection with the repairs to slides on Thurman Street, between Rugby Street and Gordon Avenue. A wooden bulkhead was constructed around the lot at the northeast corner of Union Avenue and Hancock Street to prevent the street from caving in.

Forms for retaining walls and walks in connection with widening Washington Street, between Lownsdale and Sixteenth Streets, were constructed and a portion of the existing walk moved.

The Union Avenue Bridge was cleaned and painted, except those portions painted in 1915.

A considerable amount of painting was done on the steelwork of the Front Street and First Street Bridges.

Elevated wood walks were constructed at Corbett and Admiral Streets, and at Front and Pennoyer Streets, where the old walks had been carried away by slides.

Numerous temporary barricades were erected at places made dangerous by slides. Also permanent barricades were erected at various points along improved streets as a preventative measure against accidents.

TRAFFIC DIVISION

A traffic survey taken at 86 control points throughout the city was made in May and June. This was more complete than former surveys in that the traffic was counted for 12 hours from 6 a. m. to 6 p. m., instead of from 8 to 10 hours.

Safety zones for persons boarding street cars were painted on the pavement at Broadway and Washington and at Third and Washington Streets.

Lines were painted in the center of Sixth Street between Morrison and Alder Streets for the purpose of trying out a new scheme for automobile parking.

The following work was done on painting and lettering street and other signs.

Street signs lettered	1596
Street sign blanks dipped	900
Warning signs lettered	155
Warning signs installed	42
Warnings signs replaced and repaired	36
Warning signs standards painted	36
Miscellaneous signs lettered	196

A paint mixing machine was purchased and installed in the basement of the City Hall, and at present all paint used on bridges and some other structures is mixed at this plant, it being operated by the sign painter.

No particular saving has been made in the cost of paint per gallon, but a better quality of paint is assured, as the different ingredients can be bought without chance of substitution of inferior materials against which it is practically impossible to guard when buying mixed paint in the open market. It is believed, however, that a material saving would be shown for equal quality of paint.

GRASS AND WEEDS DIVISION

No separate division was organized for the cleaning of lots and streets during the year. By arrangement with the Commissioner of Public Safety practically all work coming under this head was handled by the Bureau of Police. Such work as was done by the Bureau of Highways and Bridges in connection with the removal of earth from sidewalks was performed by the Sidewalk Division.

STREET ENCROACHMENT DIVISION

Sixteen cases of buildings within or proposed to be erected within the street area were investigated and reported on.

Four buildings were removed from street area.

Eleven cases of retaining walls to be erected within the street were reported on and in most cases ordinances drawn up granting revocable permits for the same.

Nine cases of fences within the street area were investigated. In

two cases fences were removed as a result of action by this division.

Eight cases of utility poles in the street were investigated, following complaints, in most instances, resulting in the changing of location or the elimination of the poles.

Twenty-nine applications for curb gasoline or distillate filling stations were received and reported on.

Six applications for installing or moving street clocks were reported on.

A survey and report was made of stairways encroaching on street areas within the Inner Fire Limits.

A survey and report was made of all street clocks within the city with a view to eliminating objectionable advertising from the same. In all but one or two instances all advertising other than the name of the firm has been eliminated.

Respectfully submitted,

R. E. KREMERS,
Chief, Bureau of Highways and Bridges.

January 22, 1917.

TABLE "A"

CONSTRUCTION DIVISION—WORK COMPLETED UNDER ORDINANCE FISCAL YEAR 1916

	Unit	Dec.	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Total
Hard Surface Pavement	Sq. yds	1,893	200	1,002	1,536	7,555	23,528	39,928	25,924	27,524	23,101	42,183	11,891	206,265
Concrete Sidewalk	Sq. ft.	14,986	.....	23,244	530,272.5	29,735	47,284	31,422	52,365	53,295	55,107	52,816	20,306	410,833
Concrete Curb	Lin. ft.	2,393	.....	2,599	3,323	6,006	10,972	6,436	9,230	8,655	7,161	9,838	4,732	71,345
Wood Sidewalk	Sq. ft.	660	.....	300	882	.....	.....	.....	.....	3,420	3,636	2,289	.....	11,187
Wood Curb	Lin. ft.	.....	.....	.....	208	.....	.....	.....	.....	500	.....	.....	.....	708
Wood Crosswalks	Sq. ft.	960	.....	.....	2,240	1,860	2,528	2,425	880	920	2,084	1,236	.....	15,136
Box Gutters	Lin. ft.	163	.....	.....	36	134	126	399	.....	.....	186	97	.....	1,141
Drain Pipe	Lin. ft.	118	.....	340	380	1,063	906	352	732	901	731	1,495	193	7,211
Drain Tile	Lin. ft.	366	.....	1,364	3,212	14,516	1,920	992	572	4,035	7,277	3,857	182	38,287
Catchbasins and Inlets	No. of	4	.....	7	2	29	31	10	22	33	26	30	9	203
Drainage Sumps	No. of	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	2
Water Service Pipe	Lin. ft.	.....	.....	.....	.....	1,076	1,001	44	122	.....	.....	.....	.....	2,243
Water Service Connections	No. of	.....	.....	.....	.....	58	19	4	11	.....	.....	.....	.....	92
Pavement Header	Lin. ft.	29	.....	48	78	.....	365	.....	1,236	993	338	800	.....	3,887
Macadam	Cu. yds	1,637	.....	.....	.....	.....	1,030	1,608	.....	573	260	374	.....	5,482
STREET SIGNS														
New Signs erected	No. of	460	.....	518	409	753	72	58	.....	.....	.....	.....	.....	2,270
Signs repaired	No. of	48	.....	85	116	238	97	47	.....	.....	.....	.....	.....	631

TABLE "B"

STREET MAINTENANCE DIVISION, FISCAL YEAR 1916

OLD MACADAM OR GRAVEL STREETS REDRESSED	Dec.	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Total	Miles
Lin. ft	21,932	900	4,027	40,442	10,001	11,777	11,554	5,234	2,080	6,007	12,559	17,591	144,10 4	27.292
Sq. yds	7,1430	2,358	14,645	117,451	38,540	36,044	37,182	16,353	7,164	14,001	42,430	51,809	452,10 7	.....
Cu. yds. rock used	379.5	.....	277.5	409.5	221.5	454	583	117.5	364	266.5	342	274.5	3,689.5	.....
Cost	2,230.62	65.05	1,029.12	2,557.09	1,433.05	2,270.83	2,036.12	898.45	295.70	1,387.49	1,157.77	1,954.77	17,316.0 6	.....
Unit cost, sq. yds	.03	.027	.07	.022	.037	.063	.055	.055	.0413	.095	.0273	.0377	.038 4	.....
BLOCK PAVEMENT REPAIRED														
Sq. yds	597.1/6	.....	135	211.6	250.2	194.38	237.51	14.68	544	93.26	354.4	446.0	3,078.03	.....
Cost	525.38	.....	94 25	296.74	367.03	312.10	405.86	41.58	966.49	291.12	508.87	649.88	4,459.3	.....
Unit Cost	.88	.....	.698	1.40	1.47	1.61	1.71	2.83	1.78	3.12	1.436	1.457	1.45	.....
EARTH GRADE ROADWAYS, REGRADED OR REDRESSED														
Lin. ft	.....	.....	.....	.....	.....	.....	.....	33,097	98,342	55,399	49,078	.....	236,726	44.834
Sq. yds	.....	.....	.....	.....	.....	.....	.....	113,371	323,385	178,169	187,706	.....	802,631	.....
Cost	.....	.....	.....	.....	.....	.....	.....	992.03	2,127.98	1,359.89	1,261.41	.....	5,741.31	.....
Unit Cost, sq. yds	.....	.....	.....	.....	.....	.....	.....	.009	.0066	.0075	.0067	.....	.00715	.....
CROSSWALKS CONSTRUCTED														
Sq. ft	888	540	1260	150	438	144	8398	11,736	220	1,632	11,597.5	3135	40,138.5	.....
Cost	79.29	40.52	77.59	18.63	33.58	10.43	548.36	830.55	28.14	171.80	862.99	224.08	2925.96	.....
Unit Cost, sq. ft	.0893	.075	.062	.124	.077	.0724	.065	.071	.128	.105	.0743	.0714	.0729	.....

TABLE "C"

PAVEMENT REPAIRS MADE BY CONTRACTORS, FISCAL YEAR 1916

	DECEMBER		JANUARY		FEBRUARY		MARCH		APRIL		MAY	
	No. of	Sq. Yds.	No. of	Sq. Yds.	No. of	Sq. Yds.	No. of	Sq. Yds.	No. of	Sq. Yds.	No. of	Sq. Yds.
Utility Cuts	211	284	35	59.49	91	87.53	96	127.13	109	234.6	181	266.7
Water and Sewer Cuts	77	119	15	22.46	18	22.34	66	103.32	117	326.8	110	222.11
Pavement Maintenance by City	.....	9	.....	.....	.....	.....	.....	.....	13	98.63	758	1522.45
Pavement Maintenance by Contractor	.....	377	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pavement Reconstructed Corners	42	421	.....	.....	.....	.....	.....	.....	.....	.....	1	84.98

	JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER		TOTAL	
	No. of	Sq. Yds.	No. of	Sq. Yds.	No. of	Sq. Yds.	No. of	Sq. Yds.	No. of	Sq. Yds.	No. of	Sq. Yds.	No. of	Sq. Yds.
Utility Cuts	73	203.62	166	345.13	221	341.94	38	107.01	134	331.45	24	41.4	1379	2430
Water and Sewer Cuts	34	42.54	99	108.10	117	266.93	94	170.58	128	193.51	11	15.04	886	1612.73
Pavement Maintenance by City	184	213.51	175	125.03	.....	292.27	.....	171.66	.....	139.71	.....	6.22	.....	2578.48
Pavement Maintenacne by Contractor	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	377
Pavement Reconstructed Corners	29	267	34	313.95	4	38.11	.....	.....	.....	.....	.....	.....	110	1125.04

BUREAU OF STANDARDS

The bureau is organized to include the following divisions:

1 Chemical Laboratory
2 Physical Laboratory
3 Blueprinting and photography

The bureau has acted in an advisory capacity for this and other departments of the city government, and prepared specifications for various materials of construction; has stood ready to act in close co-operation with all the departments of the City and officials of Multnomah County, the Commission of Public Docks, the Port of Portland, and School District No. 1. It offers the fullest use of its equipment, and consultation with its Chief and Division Heads, to all these public bodies. The bureau is in a position to make complete tests on most of the materials of construction, and many of the supplies in common use. Through its facilities many of the purchases of these governing bodies may be systematized, and placed on a scientific and economical basis. As the taxpayers of these various bodies are almost identical, it would not seem advisable to duplicate either the equipment or the personnel of the bureau, or to neglect its fullest use.

CHEMICAL LABORATORY DIVISION

This division is in a position to make investigations of a great variety of materials and if used to the fullest extent, should insure economy and efficiency in the purchase of supplies. The division has reported on the following miscellaneous materials, a list of which follows:

Classification	No. of Samples
Cement in Concrete	10
Gasoline	22
Paint	6
Creosote Oil	2
Cresylic Acid	1
Lubricating Oils	24
Hydrated Lime	1
Distillate	3
Coal	2
Fuel Oil	3
Kerosene	1
Miscellaneous	5
Total	80

The principal work of the Chemical Laboratory, however, has been the testing of materials and mixtures for all of the bituminous pavement laid in the city. The following table covers the Laboratory control of bituminous mixtures laid in the city during the year:

Classification	No. of Samples
Bituminous Top Mixture	204
Bituminous Base Mixture	26
Asphaltic Concrete Mixture	16
Binder Mixtures	5
Patching Mixtures	14
Special Mixtures	9
Asphaltic Concrete Cuts	3
Sheet Asphalt Cuts	5
Bituminous Top Cuts	34
Bituminous Base Cuts	3
Sand (Screen Tests)	5
Sp. Gr. of Asphaltum	6
Tests on Asphaltum	118
Tests on Asphaltum Cement	127
Total	575

This division is now conducting investigations of liquid fuels, lubricating oils and paints to the end that standard specifications may be written covering these fields.

PHYSICAL LABORATORY

In general the equipment of the Physical Laboratory consists of the following apparatus:

Cast Iron Foundry Tester	1
Cement Briquet Testing Machine	1
Devol Abrasion Cylinder (2 gang)	1
Friction Abrasion Machine	1
Oil Centrifuge	1
Rock Crusher	1
Specimen Cutting Machine	1
Standard Brick Rattler	1
150,000 lb. Universal Testing Machine	1

The above apparatus permits of a wide range of testing facilities, as may be seen by a perusal of the following list of tests conducted during the fiscal year 1916:

Classification	No. of Tests
Building Tile	12
Building Brick	9
Cement, Portland	208
Concrete Blocks, Cubes and Cylinders	312
Chains	1
Crushed Rock	6
Cast Iron	6
Douglas Fir	6
Gravel	1
Hassam Pavement	1
Nails, Tension	9
Oak, Eastern and Oregon	12
Pavements, Sections	44
Pavement Aggregates	102
Rope	378
Sand	8

During the past year the Physical Laboratory has been profitably used in connection with the construction of the Union Avenue Viaduct over the Oregon-Washington Railroad & Navigation Company's tracks and should prove of like value to future construction involved in the further elimination of grade crossings.

Pertinent to the shipbuilding industry in Portland, a number of tests of steel for resident foundries have already been made, and a greater number are to be conducted during the ensuing year.

There follows in table one the average results of tests of Portland cement for the year 1916.

RECORD OF AVERAGE TESTS ON SEVERAL BRANDS OF PORTLAND CEMENT

BRAND	FINENESS		TIME OF SET		Accelerated Test 5 Hrs. Steam 212° F.	TENSILE STRENGTH					No. of Barrels Tested
						NEAT			1 Cement 7 Days	3 Stand. and 28 Days	
	Per Cent Passing 100	Per Cent Passing 200	Initial Hrs. Min.	Final Hrs. Min.		24 Hrs.	7 Days	28 Days			
Golden Gate	98.2	82.3	4 04	6 58	OK	296	712	751	322	440	35905
Mt. Diablo	96.9	78.9	3 59	7 14	OK	337	603	695	261	385	26965
Olympic	97.4	85.7	4 06	6 57	OK	314	713	734	357	502	9739
Oregon	98.9	90.5	4 04	7 13	OK	366	747	821	358	471	25552
Santa Cruz	97.5	83.8	3 59	6 56	OK	388	814	792	394	475	26603
Standard	96.3	79.0	4 56	8 00	OK	310	702	809	280	377	4950
Washington	99.3	86.2	3 39	6 47	OK	379	766	848	262	405	4983

PRODUCTION

	Blue Paper		White Paper		Blue Cloth		WhiteC loth		Negatives		Average Value	Average size Sq. Ft.	Recti-graph Prints	Photos	
	No.	Sq.Ft.	No.	Sq.Ft	No.	Sq.Ft	No.	Sq.Ft	No.	Sq.Ft				Plates	Prints
Department of Public Works	4333	14006	2987	4828	140	948	206	1255	278	967			1489	285	1294
Department of Public Utilities	814	1299	397	1451			38	236	30	143			557	21	78
Department of Public Safety	3	12							2	40				11	20
Department of Public Affairs	410	1561	10	39									234	36	21
Auditor	23	121	13	88			1	5					2		
Multnomah County	1520	6840	102	466			2	25	12	53					8
O.-W. R. & N. Regrade	690	3073	221	382	94	495	74	130	27	41			182	55	4847
Miscellaneous	193	455	3	42			1	2	1	14			194	23	606
Total	7986	27367	3733	7296	234	1443	322	1653	350	1258	$0.109	3.09	2658	431	6884

EXPENDITURES AND RECEIPTS

EXPENSES:			
	Salaries	$ 1,604.63	
	Supplies and carfare	1,311.83	
	Total		$ 2,916.46
RECEIPTS:			
	Department of Public Works	$ 1,309.17	
	Department of Public Utilities	180.64	
	Department of Public Safety	10.71	
	Department of Public Affairs	85.18	
	Auditor	9.10	
	Multnomah County	186.45	
	O.-W. R. & N. Regrade	934.81	
	Miscellaneous	136.42	
	Total		$ 2,852.48
LOSS			$ 63.98

BUREAU OF SEWERS

December 28, 1916.

Mr. Philip H. Dater, City Engineer.

Dear Sir: I herewith submit report of operations of the Bureau of Sewers from December 1, 1915, to December 1, 1916.

Very respectfully,

Chief, Bureau of Sewers.

CONSTRUCTION DIVISION

Construction Work—The total contract value of new sewer construction completed and accepted during the year, amounts to a total of $236,533.22. The most important and largest contract completed was the Willow Street and East Eighty-second Street trunk sewer, which was practically completed during the previous fiscal year. This sewer drains an area of 700 acres, the greater portion of which is in a section known as the Montavilla district and provides direct drainage along a total length of 18,944 lineal feet of sewer. The sizes of sewer constructed varies from eight inches to sixty inches in diameter, the larger sizes from thirty inches to sixty inches being constructed of reinforced concrete pipe. The details of construction followed, and the difficulties encountered in providing a suitable bearing for the concrete pipe, were given in complete detail in the annual report of the year 1915.

The East Alder Street sewer reconstruction, from the Willamette River to East First Street, was completed during the year. The new sewer replaces a seven-foot brick sewer which has been in a dangerous condition for several years, due to being originally constructed without a piling foundation. When constructed, the sewer near the ground surface and subsequent heavy fills placed on it, caused the sewer to crack and settle badly.

The Water and Mill Street sewer replaces the outfall sewers for the Harrison Street, the Mill Street and the Clay Street sewer districts, uniting all three districts in an outfall sewer at Mill Street. The three original outfall sewers were in bad condition and have been a source of expense and danger to the city. They have been replaced by a 42-inch reinforced concrete sewer on piling foundation, extending to the harbor line on Mill Street.

During the year, the most important work for which plans and estimates have been filed was the Tanner Creek sewer. The estimated cost is $273,369.05 and it is expected that the construction work will be practically all completed during the next year. Its completion will permit the abandonment of all of the original sewer construction from Fifteenth and Burnside Streets to the Willamette River, removing a dangerous condition of the sewer which has existed for several years.

Peninsula Sewer Surveys—The Peninsula sewer project is probably the most important engineering problem under investigation at the present time, involving the question of providing drainage and sewerage facilities for an area of 6,000 acres entirely within the city limits, and probably 2,000 acres outside of the city.

Surveys were begun during the latter part of the year 1913, and have been completed during the year 1916. The investigation embraces a complete topographical survey of an area of 20,000 acres, including all of the area within the city which will probably benefit from the improvement and of the entire low-land district from the Columbia Slough to Columbia river, from the mouth of the Willamette river as far east as Fairview. The investigation also includes float readings and current meter readings in the Columbia Slough and Columbia river, to obtain information as to the action of currents at all stages of water, and the amount of discharge of the stream, where such information is lacking.

Three outlets are being considered as a means of sewage disposal for the Peninsula sewer district—the Willamette river, Columbia Slough and the Columbia river.

The Willamette river has a minimum flow of 5,000 cubic feet per second. The greater portion of the City of Portland drains to the Willamette river, and consideration must be given to the fact that the minimum flow will not sufficiently dilute the sewage from a population of a greater number than 800,000.. The City of Portland will probably not have this population until the distant future, unless it experiences a phenomenal and unexpected growth. However far in the future this may be, the drainage and sewerage districts must be established with the purpose of being made permanent, as far as can be foreseen.

In using Columbia Slough as a sewer outlet, the question of dredging a new channel and widening and enlarging the existing channel must be considered. A sufficient current may be obtained in Columbia Slough by adequate dredging, as careful levels have been run to establish the fact that sufficient fall exists to create a constant current. There are other features in connection with dredging the Columbia Slough that may operate to make it undesirable to consider as a method of sewage disposal. Dredging a new channel through private property will render the City liable for damages, the extent of which it is impossible to determine. The question of control of the slough during high water periods when the volume of water is large and the current swift, makes the undertaking an extremely hazardous one.

The Columbia river as the location of an outlet, is desirable as an outlet for the sewerage system, as the quantity of water flowing is at all times many times adequate to properly dilute all sewage that may originate in this drainage district. The greatest obstacle to the adoption of the Columbia river outlet is the difficulties of construction, which will necessarily make the final cost of providing sewerage for each lot in the Peninsula district somewhat higher than for other districts in the city. The investigations have not carried far enough to enable an estimate to be made as to how much this cost will be.

Johnson Creek Investigations—During the month of February, 1916, a flood of unusual proportions occurred on all streams in the Willamette Valley, due to the rainfall and from melting snow. Johnson creek, a small tributary to the Willamette river and flowing through Lents Addition, was the cause of considerable damage and inconvenience by overflowing its banks at several points. This occurrence has brought to our attention the need of making a study of the proper control of Johnson Creek that its waters may be confined to proper and safe channels during all stages of flood water. No measurements have

been taken of the amount of water flowing during these unusual freshets, which is one of the first and most important considerations in an investigation of this subject. To obtain data on stream flow, a gauging station has been established at a bridge over Johnson Creek near Wichita Station on the O.-W. P. Ry. A Stevens automatic water level gauge has been established to obtain continuous water level records. Current meter readings will be obtained at various stages of water, from which the discharge may be calculated. A discharge curve can be platted from the calculations from the current meter readings, and it is possible to approximate the discharge for the floods of extreme height. The floods of more than unusual extent have occurred in Johnson Creek within recent periods. One of recent date occurred during February, 1916, and another of greater extent occurred during 1910. From both of these floods there can be obtained approximately the elevation of high-water mark. To obtain more exact data as to maximum flood discharge, our observations should extend over a period of ten years, in which time it is probable that floods approaching or equalling the maximum in extent, will occur.

In connection with the problem of flood control, it will be necessary to consider the question of sewage disposal for this drainage area. The area of the City of Portland within the limits of the drainage districts amounts to 3,160 acres. The question of sewage disposal, however, is not an urgent one at the present time, and topographic surveys need not be made until the district is more thickly populated and until means have been devised for carrying through proceedings for drainage schemes to benefit areas outside of the city boundaries.

MAINTENANCE DIVISION

The greater portion of the expense of maintenance of sewers is, as usual, routine work. There were a few jobs of more than ordinary extent which may be noted.

Refilling tunnel section of the East Thirty-third Street sewer was occasioned by the settlement of several portions of East Thirty-third Street, following the heavy storms of February last. On the construction of the East Thirty-third Street sewer, the excavated fine, sandy material was used to backfill over the sewer. It was found, however, that when water reaches this material it causes it to settle and leave voids in the original tunnel excavation. To refill the tunnel excavation, holes were bored from the street surface to the top of the sewer, varying from 20 to 30 feet in depth, and sand and gravel flushed in until the voids were thoroughly filled. This method proved to be satisfactory, and is to be preferred in soil of this nature to the usual method of hand tamping the material over the barrel of the sewer, which is expensive and not always thoroughly done.

The East Oak Street sewer was reconstructed from East Second Street to Union Avenue. On making an examination of this 24-inch sewer previous to paving operations, it was discovered that the entire section of the sewer was cracked, portions of it being in danger of collapse. To avoid the necessity of removing stone block paving at some future time, it was decided to reconstruct the entire section on East Oak Street between East Second Street and Grand Avenue. As a precaution against failure of the sewer, the sewer pipe was encased in concrete.

TABLE I

AMOUNT OF EACH CONTRACT COMPLETED AND ACCEPTED DURING FISCAL YEAR 1916

Contractor	Contract	Working Days	Amount of Contract	Total Amount for Contractor	Cost of Inspection			
					For Each Contract	For Each Contractor	Per Cent of Total	
							For Contract	Total For Contractor
Azar & Co.	E. 33rd, 34th and Francis Ave.	48	$ 3,123.28		$ 503.38		16.1	
	E. Yamhill, E. 76th to E. 78th.	16	414.72		57.95		14.0	
	E. 80th and Burnside Sts.	43	1,598.64		163.90		10.2	
	E. 79th, 80th and Pine.	42	2,592.28		184.65		7.1	
	E. 43d, Powell to 29th Ave.	31	2,097.53		172.10		8.2	
	2nd, Grover to Woods.	9	271.48		27.40		10.1	
	E. 17th, Wygant to Going.	11	443.90		36.29		8.2	
	E. 68th, Flanders to Davis.	23	570.82		77.07		13.5	
	E. 44th, 45th and Davis.	39	2,266.65		139.36		6.1	
	E. Pine, E. 81st to E. 82nd.	7	261.35	13,640.65	23.23	1,385.33	8.9	10.2
Alexis Cont. Co.	E. Alder, 2nd St. to Willamette River.		25,688.87	25,688.87	944.20	944.20	3.7	3.7
Hahn & Rebman	E. 60th and Holladay.		293.31		28.80		9.8	
	Willow and E. 60th.	30	1,523.01	1,816.32	117.50	146.30	7.7	8.1
Wm. Lind	E. 78th and E. Salmon.	9	579.77		14.20		2.5	
	Willow and E. 82nd St.		155,175.19		4,692.15		3.0	
	E. 28th, Eugene to Knott.	23	2,186.75		88.25		4.0	
	E. 65th and Burnside.	35	3,818.10		244.60		6.4	
	E. 79th, Burnside to Glisan.	31	2,403.07		114.68		4.8	
	Schuyler & E. 6th St.	18	847.55		72.13		8.5	
	Front St. & Private Property.	56	2,998.70	168,009.13	276.34	5,502.35	9.2	3.3
Toriff & Callalay	E. 83d St., Davis to Glisan.	30	1,162.22	1,162.22	146.95	146.95	12.6	12.6
Edw. Sandeberg	E. Davis and E. 72nd.	43	7,343.46		272.85		3.7	
	1st St., Grover to Woods.	6	278.57	7,622.03	22.67	295.52	8.2	3.9
J. P. O'Neill	Water and Mill St. Sewer.	129	15,085.26	15,085.26	1,044.25	1,044.25	6.9	6.9

TABLE 1—Continued

AMOUNT OF EACH CONTRACT COMPLETED AND ACCEPTED DURING FISCAL YEAR 1916

Contractor	Contract	Working Days	Amount of Contract	Total Amount for Contractor	Cost of Inspection			
					For Each Contract	For Each Contractor	Per Cent of Total	
							For Contract	Total For Contractor
Shuholm Co	E. 80th, Glisan to North Villa	13	467.15	.....	59.55	.....	12.8	.....
	Claybourne Ave. and E. 16th St	23	945.55	.....	151.80	.....	16.1	.....
	Nehalem, E. 36th to 37th	13	377.21	.....	42.60	.....	11.3	.....
	E. 32d St., Francis Ave. to Powell	32	636.63	2,426.54	120.65	374.60	19.0	15.4
Jno. Keating	Montgomery Dr. and Private Prop	28	1,032.20	1,032.20	119.00	119.00	11.0	11.0
Total			236,533.22	236,533.22	9,958.50	9,958.50	.....	.....

TABLE II

COST OF CONTRACTS AWARDED, CONTRACTS ACCEPTED AND PLANS FILED DURING FISCAL YEAR 1916

Month	Cost of Sewer Work Awarded (Contract Price)	Cost of Sewer Work Accepted (Final)	Cost of New Work Filed (Prelim. Est.)	No. of Sewer Plans Filed
December, '15		$ 579.77	$ 7,250.02	4
January, '16	$ 8,528.42	155,175.19		
February	5,874.45	28,812.15	11,375.30	6
March	5,649.82	4,057.00	3,028.15	2
April		8,866.47	2,303.60	6
May	9,013.53	3,818.10	3,273.30	2
June	1,322.65	19,554.12	1,392.85	3
July		6,012.57		
August	3,582.28	715.38	3,124.60	1
September	1,787.32	1,484.18	8,817.20	5
October	339.95	4,181.02	278,013.60	5
November	8,974.25	3,277.27		
Totals	$ 45,072.67	$ 236,533.22	$ 318,578.62	34

TABLE III

EXPENDITURES FOR SEWERS SINCE 1865

Year	Expended During Year	Total at End of Year
1889	$ 140,346	$ 381,790
1890	49,114	430,934
1891	61,510	492,444
1892	249,669	742,113
1893	171,649	913,762
1894	21,198	934,960
1895	16,793	951,753
1896	13,005	964,768
1897	5,488	970,246
1898	7,000	977,246
1899	12,517	989,763
1900	19,391	1,009,154
1901	113,187	1,122,341
1902	57.008	1,179,349
1903	140,137	1,319,486
1904	58,482	1,377,968
1905	69,142	1,447,110
1906	69,706	1,516,816
1907	92,781	1,609,597
1908	77,407	1,687,004
1909	313,426	2,000,430
1910	905,718	2,906,148
1911	556,291	3,462,439
1912 (Dec. 31)	566,973	4,039,412
1913 (Dec. 1)	778,284	4,807,696
1914	367,380	5,175,076
1915	209,652	5,384,728
1916	236,533	5,621,261

TABLE IV
LENGTH, SIZE AND MATERIAL OF TRUNK SEWERS IN PLACE DECEMBER 1, 1916

Size, Inches	Monolithic Concrete			Reinforced Concrete Pipe			Brick Wood		Total All Kinds	
	Laid Before Dec. 1, 1915	Laid Dec. 1, 1915 to Dec. 1, 1916	Total Dec. 1, 1916	Laid Before Dec. 1, 1915	Laid Dec. 1, 1915 to Dec. 1, 1916	Total Dec. 1, 1916	Total Dec. 1, 1916	Total Dec. 1, 1916	Laid Dec. 1, 1915 to Dec. 1, 1916	Total in Place Dec. 1, 1916
CIRCULAR										
24	1,722		1,722				4,576	34 (1916)	34	6,332
27	3,333		3,333	4,319		4,319				7,652
28							750			750
30	24,745		24,745	6,370	1,634	8,004	3,026		1,634	35,775
32	3,575		3,575				2,259			5,834
33	6,320	594	6,914	2,289		2,289			594	9,203
34							2,397			2,397
36	7,280		7,280	3,151	2,311	5,462	5,017		2,311	17,759
38							1,105			1,105
39				2,182		2,182				2,182
40							3,469			3,469
42	4,470	930	5,400	6,776	1,658	8,434	3,402		2,588	17,236
43	1,300		1,300							1,300
44							1,230			1,230
45	3,211		3,211							3,211
46							2,653			2,653
48	6,933		6,933				3,402	100		10,435
50							359			359
51	757		757							757
52							1,614			1,614
54	3,267		3,267	747	7,597	8,344	1,722		7,597	13,333
56	276		276				2,325			2,601
57	1,017		1,017							1,017
58							780			780
60	11,531		11,531	561	4,278	4,839	1,446	70	4,278	17,886
62	3,877		3,877				2,521			6,398
63	2,477		2,477							2,477
64							969			969
66	1,318		1,318	2,552		2,552	1,921			5,791
68							460			460
72	2,145		2,145				6,684			8,829
74							140			140
76							1,600			1,600
78	3,385		3,385				162	100		3,647
80							2,147			2,147
82							260			260

LENGTH, SIZE AND MATERIAL OF TRUNK SEWERS IN PLACE DECEMBER 1, 1916—Continued

Size, Inches	Monolithic Concrete			Reinforced Concrete Pipe			Brick Wood		Total All Kinds	
	Laid Before Dec. 1, 1915	Laid Dec. 1, 1915 to Dec. 1, 1916	Total Dec. 1, 1916	Laid Before Dec. 1, 1915	Laid Dec. 1, 1915 to Dec. 1, 1916	Total Dec. 1, 1916	Total Dec. 1, 1916	Total Dec. 1, 1916	Laid Dec. 1, 1915 to Dec. 1, 1916	Total in Place Dec. 1, 1916
84	4,208	772	4,980				1,968		772	6,948
87	3,046		3,046							3,046
90							742			742
96	723		723							723
116							833			833
118							1,021			1,021
120							3,230			3,230
EGG SHAPE										
24x36	6,947		6,947				1,527			8,474
26x39	1,320		1,320							1,320
26x39.5	556		556							556
28x42							1,806			1,806
29x44							964			964
30x45							2,504			2,504
34x51							510			510
39x59							698			698
40x60							4,298			4,298
44x66							3,762			3,762
48x72							3,079			3,079
49x73.5							3,760			3,760
54x81							3,678			3,678
60x84							3,984			3,984
59x88							1,828			1,828
64x96							1,815			1,815
66x96							2,147			2,147
HORSE-SHOE										
30x45	78		78							78
40x40	2,767		2,767							2,767
45x42	5,689		5,689							5,689
48x43	1,212		1,212							1,212
48x50	401		401							401
48x59	791		791							791
54¾x60	1,487		1,487							1,487
60x62	3,776		3,776							3,776
72x67	2,082		2,082							2,082
72x69	3,321		3,321							3,321
72x71	3,719		3,719							3,719

LENGTH, SIZE AND MATERIAL OF TRUNK SEWERS IN PLACE DECEMBER 1, 1916—Continued

Size, Inches	Monolithic Concrete			Reinforced Concrete Pipe			Brick Wood		Total All Kinds	
	Laid Before Dec. 1, 1915	Laid Dec. 1, 1915 to Dec. 1, 1916	Total Dec. 1, 1916	Laid Before Dec. 1, 1915	Laid Dec. 1, 1915 to Dec. 1, 1916	Total Dec. 1, 1916	Total Dec. 1, 1916	Total Dec. 1, 1916	Laid Dec. 1, 1915 to Dec. 1, 1916	Total in Place Dec. 1, 1916
72x73	2,285		2,285							2,285
72x66	1,512		1,512							1,512
72x71.5	3,081		3,081							3,081
90x75¾	851		851							851
90x80¾	2,940		2,940							2,940
90x85⅞	3,990		3,990							3,990
Total	149,721	2,296	152,017	28,947	17,478	46,425	102,550	304	19,808	301,296

TABLE V

LENGTH, SIZE AND MATERIAL OF PIPE SEWERS IN PLACE DECEMBER 1, 1916

Size (Inches)	Vitrified Pipe			Cement Pipe			Total Both Kinds Laid Dec. 1, 1915 to Dec. 1, 1916	Total Both Kinds in Place Dec. 1, 1916 Lineal Feet
	Laid Prior to Dec. 1, 1915	Laid Dec. 1, 1915 to Dec. 1, 1916	Total in Place Dec. 1, 1916 Lineal Feet	Laid Prior to Dec. 1, 1915	Laid Dec. 1, 1915 to Dec. 1, 1916	Total in Place Dec. 1, 1916 Lineal Feet		
6	511,221	15,170	526,391	134,723	4,764	139,487	19,934	665,878
8	701,404	13,899	715,303	122,196	7,367	129,563	21,266	844,866
9	45,034	.....	45,034	.....	.....	.....	.....	45,034
10	320,762	3,509	324,271	46,794	392	47,186	3,901	371,457
12	313,991	2,037	316,028	25,577	1,989	27,566	4,026	343,594
14	129,352	2,629	131,981	15,655	2,113	17,768	4,742	149,749
15	20,144	.....	20,144	.....	.....	.....	.....	20,144
16	77,775	424	78,199	5,741	532	6,273	956	84,472
18	41,815	1,041	42,856	8,798	430	9,228	1,471	52,084
20	38,475	571	39,046	6,221	.....	6,221	571	45,267
22	23,733	471	24,204	5,076	.....	5,076	471	29,280
24	42,466	945	43,411	3,340	403	3,743	1,348	47,154
30	670	.....	670	.....	.....	.....	.....	670
Total	2,266,842	40,696	2,307,538	374,121	17,990	392,111	58,686	2,699,649

Total length, all sewers accepted during 1916.....78,494 lin. ft. or 14.87 miles.
Total length, all sewers accepted during 1916, not including 6 in. pipe.....58,560 lin. ft. or 11.09 miles.

TABLE VI

MISCELLANEOUS ITEMS OF CONTRACTS ACCEPTED DURING 1916

Elbows and bends (vitrified), 6-inch, number of	648
Elbows and bends (vitrified), 8-inch, number of	1
Elbows and bends (vitrified), 10-inch, number of	1
Elbows and bends (cement), 6-inch	391
Elbows and bends (cement), 8-inch	2
Manholes (standard), number of	142
Manholes (drop), number of	3
Manholes (inc. 5 feet of sewer), number of	53
Inlets, concrete, number of	195
Excavation (earth), cubic yards	137,248
Excavation (loose rock), cubic yards	718
Excavation (solid rock), cubic yards	12
Extra concrete 1-2 -4, cubic yards	59
Extra concrete 1-2½-5, cubic yards	746
Extra gravel, cubic yards	676
Extra brick, number of	584
Extra lumber, M. feet of B. M	914
Connections to existing sewers, number of	13
Deep house connections, number of	37
Lineal feet of cement curb taken up and relaid	18
Square yards of cement sidewalk taken up and relaid	1,236
Square yards pavement taken up and relaid, stone block	540
Square yards pavement taken up and relaid, concrete	7
Square yards pavement taken up and relaid, granitoid	10
Extra steel, pounds	7,477
Piling, in place, lineal feet	15,970
Second class sewer pipe, 8-inch, lineal foot	1,380
Second class sewer pipe, 6-inch, lineal feet	211
Sewer pipe in concrete, 8-inch, lineal foot	1,423
Sewer pipe in concrete, 10-inch, lineal foot	208
Sewer pipe in concrete, 14-inch, lineal foot	293
Sewer pipe in concrete, 24-inch, lineal foot	667
Junction chamber at East Eighty-second and East Glisan streets	1
Junction chamber at East Eighty-first and East Stark streets	1

TABLE VII

WORK COSTS ON PENINSULA SEWER AND TANNER CREEK AND TOTALS FOR 1916—PERSONAL SERVICE

Peninsula Sewer—	Previous to 1915	1915	1916	Total
Office work	$2,418.00	$1,872.00	$2,781.00	$7,071.00
Surveys	15,173.00	1,837.00	790.00	17,800.00
	$ 17,591.00	3,709.00	3,571.00	24,871.00
Tanner Creek—				
Office work	195.00	1,430.00	905.00	2,530.00
Surveys	23.00	450.00		473.00
	218.00	1,880.00	905.00	3,003.00
Miscel. Work for 1916:				Total for 1916
Office			$ 5,891.00	$ 9,577.00
Surveys			3,890.00	4,680.00
Total field and office cost incl. half time of Chief of Bureau				$14,257.00

COSTS OF OFFICE AND SURVEY WORK 1916—PERSONAL SERVICE

	Office Work	Surveys	Personal Service
Peninsula Surveys	$ 2,781.00	$ 790.00	$ 3,571.00
Tanner Creek Sewer	905.00	.....	905.00
Miscellaneous	5,891.00	3,890.00	9,781.00
Total	$ 9,577.00	$ 4,680.00	$ 14,257.00

RAINFALL AND SEWER FLOW RECORD FOR HOLLADAY AVENUE SEWER DISTRICT

Total area ..... 205.37 acres
Paved area .... 58.67 acres
House roof .... 24.26 acres
Impervious 82.93

Residence district of slight slopes.
570 residences in district.
Sewer flow measured by automatic gauge in stilling well at side of 42-inch sewer.

1. Storm of December 20 and 21, 1915

Storm began 2:35 P. M. Dec. 20, ended 11:15 P. M. Dec. 21.....32 hrs. 40 min.
Run-off began 2:47 P. M. Dec. 20, ended 12:00 P. M Dec. 21....33 hrs. 13 min.
Total rainfall on whole area (1.99 in.).....1,483,545 cu. ft.
Total rainfall on impervious area..... 598,990 cu. ft.
Total rainfall on paved area..... 423,870 cu. ft.
Total flow in sewer..... 447,793 cu. ft.
Total sanitary flow in sewer..... 47,832 cu. ft.

Total storm flow in sewer..... 399,961 cu. ft.

$\frac{399,961}{1,483,545} = 0.2695 = 26.95$ per cent of total rainfall reaching sewer.

2. Storm of December 10 and 11, 1915

Storm began 2:50 P. M. Dec. 10, ended 3:31 A. M. Dec. 11.....12 hrs. 41 min.
Run-off began 3:16 P. M. Dec. 10, ended 8:00 A. M. Dec. 11....16 hrs. 44 min.
Total rainfall on whole area (0.41 in.)..... 305,655 cu. ft.
Total rainfall on impervious area..... 123,410 cu. ft.
Total rainfall on paved area..... 87,330 cu. ft.
Total flow in sewer..... 105,586 cu. ft.
Total sanitary flow in sewer..... 24,096 cu. ft.

Total storm flow in sewer..... 81,490 cu. ft.

$\frac{81,490}{305,655} = 0.2666 = 26.66$ per cent of total rainfall reaching sewer.

3. Storm of December 24, 1915

Storm from 5:49 P. M. to 11:20 P. M..... 5 hrs. 31 min.
Run-off from 7:18 P. M. to 1:20 A. M..... 6 hrs. 2 min
Total rainfall over whole area (0.45 in.)..... 335,475 cu. ft.
Total rainfall over impervious area..... 135,450 cu. ft.
Total rainfall over paved area..... 98,850 cu. ft.
Total run-off in sewer..... 101,850 cu. ft.
Total sanitary flow in sewer..... 8,688 cu. ft.

Total storm flow..... 93,162 cu. ft.

$\frac{93,162}{335.475} = 0.2777 = 27.77$ per cent of total rainfall reaching sewer.

4. Storm of March 24, 25 and 26, 1916

Storm began 10:05 A. M. Mar. 24, ended 2:22 P. M. Mar. 26....52 hrs. 17 min.
Run-off from 10:40 A. M. Mar. 24 to 6:10 P. M. Mar. 26.....55 hrs 30 min.
Total rainfall over whole area (3.22 inches).....2,400,510 cu. ft.
Total rainfall over impervious area..... 969,222 cu. ft.
Total rainfall over paved area..... 685,860 cu. ft.
Total run-off in sewer..... 698,284 cu. ft.
Total sanitary flow in sewer..... 79,920 cu. ft.

Total storm flow..... 618,364 cu. ft.

$\frac{618,364}{2,400,510} = 0.2576 = 25.76$ per cent of rainfall reaching sewer.

TABLE VII

SHOWING AMOUNT AND COST OF THE VARIOUS KINDS OF WORK DONE BY THE SEWER MAINTENANCE DIVISION DURING FISCAL YEAR 1916

Nature of Work	Number of Jobs			Total Cost	Average Cost per Job
	East Side	West Side	Total		
Building catchbasins	13	7	20	$ 634.96	$ 31.17
Building catchbasins, new radius	23	31	54	1,637.25	30.32
Flushing catchbasins	85	186	271	395.96	1.46
Repairing catchbasins	45	50	95	889.27	9.37
Laying new pipes to connect C. Bs.	31	36	67	1,904.05	28.42
Opening C. B. to remove obstructions	7	4	11	222.41	20.22
Investigating complaints	63	37	100	76.05	0.76
Constructing house laterals	12	2	14	375.27	26.81
Locating house laterals	41	3	44	511.48	11.62
Repairing house laterals	37		37	567.70	15.33
Cleaning sewer intakes	2	28	30	225.63	7.52
Repairing lampholes	15	5	20	83.63	4.18
Constructing manholes	10	4	14	768.35	54.88
Repairing manholes	86	49	135	1,125.67	8.34
Miscellaneous work				1,464.81	
Cleaning outfalls	1	1	2	30.39	15.20
Cleaning sewers with turbine	Lin. Ft.		89,580	1,635.04	0.0182 ft.
Flushing sewers	26	5	31	125.53	4.05
Inspecting sewers	6	18	24	55.29	2.30
Opening stopped sewers	48	42	90	1,198.71	13.32
Repairing sewers	25	13	38	1,843.82	48.52
Refilling settled trenches	152	36	188	1,282.48	6.83
Total				$17,053.75	
Special work				20,325.93	
Grand total				37,379.68	

COST OF SPECIAL WORK BY THE MAINTENANCE DIVISION, BUREAU OF SEWERS, FISCAL YEAR 1916

D- 24	Repair sewer at Chapman and Morrison	$ 3.00*
D-185	Clean manholes in Beaumont	33.62*
W- 2	Use of sewer truck by H. & B.	6.50*
10	Repair Johnson Creek Sewer	92.13*
75	Repair Alder Street Outfall	98.09*
63	Construct catchbasin connection on Vista Avenue	167.98*
106	Construct catchbasin at 5th and Morrison Streets	3.78*
128	Service of E. S. Alger to Highways and Bridges	39.19*
178	Flush sumps in Piedmont	14.38*
185	Clean manholes in Beaumont	9.88
190	Relay sewer at East 48th and Grant	394.23
196	Build catchbasin at East Burnside and Buchtel Ave.	54.94
201	Flush 5th Street at City Hall	2.00
208	Fill settled trenches on 28th Avenue	24.75
211	Construct catchbasin at East 39th and Hawthorne	48.47
215	Repair sewer at East 19th and Taylor	181.18
218	Construct shelter for gauge on S. P. & S. Bridge	20.24
219	Repair leakage in City Hall basement	7.38
220	Repair pipe drain at City Hall	28.75
227	Fill settled trenches on Long Avenue	24.06
236	Use of sewer truck by Highways and Bridges	4.75
241	Repairs Madison Street Outfall	63.10
242	Repair house lateral on East 23d Street N.	27.78
243	Repair house lateral on East Couch Street	24.19
258	Construct intake at Portland Boulevard and Union Ave.	48.91
269	Fill old East Alder Street Sewer	1,064.05
270	Repair Yamhill Street Outfall	124.97
274	Move tool box from Insley Avenue	9.25
283	Investigate sewer at East 46th and Salmon	435.03
288	Use of truck by Highways and Bridges	4.75
298	Use of truck by Highways and Bridges	4.88
329	Landslide at 1st and Grover	234.86
330	Land slide at Thurman Street	1,622.38
345	Burning out frozen catchbasins	167.99
346	Land slide at Vermont and Front Streets	7.13
347	Land slide at Julia and Corbett	1.94
349	Land slide at Montgomery Drive	1,337.02
353	Test holes on Miles Street	3.25
355	Investigate East 47th and Alder Streets	76.75
356	Investigate East 7th and Hancock	257.33
458 & 368	Sink shaft at Lawrence residence	152.25
373	East 33d and Broadway tunnel	201.75
374	East 33d and Tillamook tunnel	16.75
385	East 32d and Franklin slide	959.97
386	Repair settlement of sewer in Long Avenue	13.75
387	Repair East 34th Street and Francis Avenue	7.38
388	Repair East 34th Street and Gladstone Avenue	16.38
430	Montgomery Drive and Buena Vista slide	157.35
W-431	Willamette Boulevard slide	612.16
435	Extending lateral in Council Crest Park	104.21
436	Refill East 33d Street tunnel	2,283.74
447	C. B. connection on Washougal Avenue	79.18
455	Const. manhole at Hood and Woods Streets	71.14
468	Shaft on Hood and Caruthers Streets	37.63
479	Shaft at 10th and Kearney Streets	23.43
488	Repair private sewer, Chapman and Market Streets	3.88
491	Construct drain at Fifth and Ankeny Streets	194.58
493	Relay sewer at East 47th and Alder Streets	1,918.34
499	Repair private sewer No. 430 Hoyt Street	4.01
503	Refill cavity at 1st and Mead Streets	11.27
532	Hauling material from Thurman Street slide	66.25
533	Opening shaft at Third and Market Streets	8.25
566-534	Build manhole above Thurman Street slide	182.20
539	Build intake on Aspen Street	30.14

* Indicates work carried over from 1915.

COST OF SPECIAL WORK BY THE MAINTENANCE DIVISION, BUREAU OF SEWERS, FISCAL YEAR 1916—Continued

570	Build catchbasin at Fifth and Stark	$ 41.72
576	Repair Upper Drive Sewer	582.61
586	Drain at East 33d and Bybee	92.70
587	Test holes for Tanner Creek Sewer	139.02
589	Upper Drive and Smith Street	165.45
594	Test at Front and Hood Streets	18.43
603	Test at 29th and Quimby Streets	38.64
612	Repair Summit Drive and Talbot Road	86.63
613	Repair sewer in St. Helens road	5.51
615	Test sewer at Gay and Blandena Streets	17.63
619	Repair depression at East 26th and Rhone Streets	1.63
629	Construct intake in Marquam Gulch Sewer	78.72
648	Open sewer at East 7th and Yamhill Streets	26.60
654	Reconstruct catchbasins at 16th and Washington	93.93
656	Lay 12-inch sewer in Marquam Gulch	113.58
657	Build 14-inch sewer at 6th and Terwilliger	22.73
662	Open stopped sewer on Glisan Street	17.57
664	Flush all manholes stopped by flood	36.44
677	Lay 8-inch sewer on 25th and Woodward	46.83
691	Rpeair sewer at East 33d and Broadway	160.06
693	Construct box gutters on Linnton Road	75.12
702	Repair house lateral at East 19th and Sandy	10.32
737	Relay sewer at Ross and Page Streets	57.47
749	Open and investigate sewer at Page and Borthwick	156.93
750	Repair sewer at Second and Morrison	125.04
763	Repair sewer at Milwaukie and Mitchell	39.94
764	Investigate sewer stopped at 18th and Upshur	22.85
781	Relay sewer at Hood and Woods Streets	434.68
782	Investigate sewer at 1067 Westover Road	10.13
1019	Locate sewer at East 44th and Couch Streets	18.25
1020	Construct wier on Johnson Creek	101.50
1088	Repair junction of Johnson Creek Sewer Outfall	16.71
1089	Investigate sewer at Woods and Grover Streets	19.57
1105	Repair Philadelphia Street Outfall	89.89
1109	Repair Everett Street Outfall	212.69
1110	Repair sewer at foot of Glisan Street	36.08
1117	Construct gauge houses on Mill Street Sewer	37.18
1121	Repair sewer at East Third and Oak	1,617.17
W-1123	Relay house lateral at East 32d and Stark	91.41
1133	Refill tunnel at Broadway and Washington	17.13
1147	Open stopped sewer at West Park and Mill	10.25
1168	Open shaft at 14th and Irving	23.61
1171	Relay house lateral at Homer and Periander	27.48
1169	Open shaft at Front and Couch	243.02
1176	Repair catchbasin at Front and Vine	84.25
1179	Relay sewer at Homer and Periander Streets	43.16
1183	Repair Everett Street Outfall	158.09
1201	Open stopped sewer at 14th and Washington	68.34
1202	Open stopped sewer at Front and Couch	139.84
1203	Lay new pipe at 14th and Washington	99.27
1212	Repair Pine Street Outfall	1.71
1215	Connect catchbasin at 16th and Washington	125.48
1217	Construct tunnel from Lawrence shaft	322.23
1226	Investigate stopped sewer, Union and Lombard	14.97
1229	Investigate stopped sewer at East 43d and Hazelfern	15.13
1230	Test holes at Montgomery and Myrtle	7.63
1235	Correct drainage at Elizabeth and Chapman	42.69
	Total	$20,325.93

BUREAU OF GRADE SEPARATION

Draft of a report to be submitted to the Council by the Commissioner of Public Works for the operation of the Bureau of Grade Separation of the Office of the City Engineer, for the fiscal year ending November 30, 1916:

DEPARTMENT OF PUBLIC WORKS
OFFICE OF THE CITY ENGINEER
BUREAU OF GRADE SEPARATION

Field Division—In charge of surveys of determined and prospective projects of grade separations, and for giving lines and levels of projects under construction. Composition of Division: A Chief of Party with two assistants, supplemented by occasional increase in force for special work and foundation determinations.

Division of Design—Directly under supervision of the Chief of Bureau and is composed of two Engineers rated as "Senior Draftsmen," upon whom devolves preparation of plans, and with occasional tracers, rated as "draftsmen."

Construction Division—In charge of an Engineer rated as "Structural Assistants," reporting directly to the Chief of Bureau, aided during construction by Inspectors as occasion warrants.

These three divisions working in harmony, supplement and aid each other. The following is a resume of the work performed by each independently, consolidated as an effective whole in the Bureau report.

FIELD DIVISION

Union Avenue Improvement, from Bryant Street to Columbia Boulevard: Lines and grades given for construction and for the determination of quantities entering into the final estimate. Contract for the viaduct signed January 27, embracing a period of 120 days, was not finally accepted by the City Engineer until November 17. This required the presence of this Division for a much longer period than was contemplated, necessitating their employment on this particular project for a longer period than they should have been and prevented investigations which were contemplated for other projects.

Fulton Park Grade Separation—Property survey was made of affected area, complete with stadia topography and foundation determinations, by which it was ascertained that "under" crossings of the tracks of the Southern Pacific Company (O. & C. Ry.) and the Oregon Electric Railway were feasible.

East Thirty-third Street—Survey was made for a viaduct to replace the present wooden trestle over the tracks of the O-W. R. & N. Company in Sullivan Gulch, including the property in the affected area, with topographic stadia and foundation determinations.

East Forty-second Street—Survey of property in affected area, made in response to a petition of residents of Laurelhurst, for a viaduct, complete with stadia topography and foundation determinations.

O-W. R. & N. Regrade in Sullivan Gulch. Numerous surveys were made to secure additional information necessary for designing viaducts included in this project, in addtion to which, stadia topo-

graphical surveys were made at East Thirty-seventh and Sandy Boulevard, East Forty-seventh Street, East Sixtieth Street, and East Seventy-fourth Street, for use of the Legal Bureau in making appeals from the Council award of damages to property by reason of change of grade of city streets. As opportunity presents itself, accurate determinations are being made of monuments at street intersections where viaducts will be built, to the end that structures shall be accurately constructed to line and grade.

General Grade Crossing Examinations—Preliminary survey has been commenced in the district bounded by the river, Broadway, Grand Avenue and East Market Street, for the purpose of formulating definite plans looking to the separation of grade crossings, but press of work in other fields has prevented its further prosecution.

DIVISION OF DESIGN

Union Avenue Viaduct, Bryant Street to Columbia Boulevard. Plans were completed prior to January, 1916. From time to time this division has drawn construction details for contractor's use and has been actively engaged in supervision of construction when inspection force has been inadequate to insure proper work by the contractors, and where it would have been inexpedient to employ inspectors without technical training, especially if unfamiliar with the plans. Determination of unit quantities for final estimate were made by this division.

Stark Street Extension: Sketch and tentative estimate of cost was prepared for a concrete encased steel arch bridge over Balch Gulch, but as the project was abandoned no further work was performed.

Sullivan Gulch: O-W. R. & N. regrade. Plans and specifications for this project had sufficiently progressed by the latter part of March to admit of their being filed with the Auditor, but on account of protracted negotiations in reference to the payments to the contractor upon the monthly estimate of the Engineer and of the determination by the Council of the proportion of the 60 per cent assessment to be borne by the P. R. L. & P. Co., and the O-W. R. & N. Co., it was impractical to file with the Auditor the City Engineer's report, plans and specifications and estimate of cost until July 8, 1916. This delay enabled the division to complete all plans except the details of the retaining wall on Halsey Street approach to the Sandy Boulevard viaduct, necessitated by the adoption by the Council of alternative plan "B, 1½" and of the detailed sewer plans necessited by the request of the O-W. R. & N. Co., for permission to lower their grade one (1) foot below profile grade, which plans are now complete and available for use of bidders.

In view of the appeals of property owners from the Council award of damages by reason of the change of grade of city streets, and also on account of condemnation suits filed by the City for the acquisition of land for street purposes and for the easements to slope embankments, a large number of topographic plats have been prepared and are being prepared for the use of the Legal Bureau.

Fulton Park Separation: Complete map has been made of the affected area, with one (1) foot contours showing the topographical features and improvements made upon the property. On this a new street has been laid out, eliminating the dangerous grade crossings by means of "under" crossings of the tracks of the Southern Pacific Company and the Oregon Electric Railway. This proposed street has been care-

fully laid out on the ground for the accurate determination of quantities and changes in property lines. Pressure of other work has prevented active design being completed, but it is expected that plans will be completed by the spring of 1917.

CONSTRUCTION DIVISION

Union Avenue Viaduct, Bryant Street to Columbia Boulevard: This reinforced concrete viaduct was the only construction undertaken by this bureau during this year. The design is simple and construction difficulties were few, added to which the weather conditions were ideal, with the exception of the earlier spring days, but on account of inadequate equipment, supplemented by inefficient methods and superintendence, unusual inspection was required to complete the viaduct in an acceptable manner within two hundred ninety-five (295) days, although the original contract period was only one hundred twenty (120) days. Upon the completion of the viaduct, the inspection force was laid off and the Structural Assistant was detailed on other work.

Since the completion of the Union Avenue Viaduct, the Structural Assistant has been employed in field work of the Sullivan Gulch project, in conducting prospective bidders on the above named project over the ground, furnishing them information upon which to base their bids and in making field examinations of grade crossings of the tracks of all the railroads in the city.

GENERAL

Vital statistics which have been compiled and disseminated, and the publicity which the press has given to the Sullivan Gulch project, have furnished food for thought to the broad-minded and public-spirited mass of the people, the remainder can only be reached when they are directly injured or affected.

There are five hundred fifty (550) crossings of city streets which are made by railroads, exclusive of the streets affected by the Terminal Company and by the Portland Railway, Light & Power Company's interurban lines. From this number, twenty-three (23) viaducts which cross the railroad tracks and eleven (11) streets which cross thereunder have already been eliminated, to which may soon be added the eight (8) grade crossings of the Sullivan Gulch project and the three (3) of the Fulton Park project, leaving five hundred five (505) grade crossings which remain to be dealt with.

It is not the intent nor policy of this department to impose burdensome nor unnecessary expense upon the public nor the railroads in dealing with the situation. In sparsely settled districts, and where traffic does not warrant grade separations, the question will be dealt with through the Public Service Commission, and, where it is necessary in regarding a project as a whole to consider the rights of the City, it is deemed the better policy to eliminate only such grade crossings as will best conserve the public interest at this time, reserving the right to open additional streets as traffic conditions in the future may warrant.

Analysis of the five hundred-odd (500-+) crossings beyond those which have been and are to be separated in the near future, reveals the fact that there are two hundred eighteen (218) streets which are dedicated to public use across railroad rights of way, but which are unimproved and across which there is no traffic except such occasional

sporadic travel of pedestrians as may be accommodated at other crossings without detriment to public interests. Added to this, there are thirty-five (35) grade crossings where improvements of a temporary nature have been made, but where traffic is light, leaving less than two hundred fifty (250) to be considered. Many of these last enumerated crossings may be dealt with separately and others will have to be improved by the city without asking aid of other interests, should traffic conditions warrant the expenditure and, still again, there are street crossings which are dedicated to public use where topographic conditions preclude possible grade crossings and where economic considerations will preclude the use of public funds to further essentially private interests.

This brings us back to the consideration of grade crossings, when considered as projects in which a railroad right of way is concerned as a unit.

The Department of Public Works is contemplating the presentation to the Council of a comprehensive plan for the elimination or protection of all grade crossings in the city, having due regard to the public pocket book and the interest of all concerned, but with the limited funds available time will be required.

Our present City Charter, whilst in the main intended to be fair and just to all concerned, is in the matter of grade separation and protection of grade crossings, crude, cumbersome, dilatory, and it will be to the City's interest to so amend it that the "Special Assessment District" may be abolished and the City's proportion of cost be met by direct taxation. This alone will remove much of the delay and cumbersome procedure.

Based upon the activities herein before recorded, during the past and immediately preceding years, and by the information thereby deduced or obtained, the grade separation projects under immediate consideration are herein discussed and explained and report is made of the construction of the Union Avenue Improvement from Bryant Street to Columbia Boulevard.

Sullivan Gulch Project: Extending over a period of years, attempts had been made to separate the grade crossings of this line of railroad, but definite plans were not undertaken until in the fall and winter of 1913, after the installation of Commission form of government.

Survey of the affected area was made in February, 1914. study of the various phases of the situation being commenced in May of the same year.

In this project, the separation of the grades of the City streets and the tracks of the Oregon-Washington Railroad & Navigation Company presented four (4) separate solutions:

FIRST: The complete **depression** of the tracks of the railroad, leaving the grade of the city streets unchanged.

SECOND: The complete elevation of the tracks of the railroad, leaving the grade of the city streets unchanged.

THIRD: The complete elevation of the city streets, leaving the grades of the railroad unchanged.

FOURTH: The partial depression of the railroad tracks and the partial elevation of the grades of city streets.

Consideration of these problems resulted in the following determinations:

First: By the total depression of the railroad tracks, a maximum

cost of construction would be imposed upon the railroad and a minimum cost would be imposed upon the City for inconveniences and damages to abutting property by reason of the absence of change in grades of city streets. Such total depression, however, would necessitate the entire reconstruction of the "Sullivan Gulch Main Intercepting Sewer" at a cost in excess of $125,000.00, based on the present labor and material market. In addition to this, physical connection between the rails of the railroad and the present and prospective industries would be impractical, thereby destroying present industries located thereon and prohibiting the installation of new industries.

Second: Street grades remaining as they now are and elevating the tracks of the railroad twenty feet (20') at Sandy Boulevard would require a grade in excess of two (2) per cent, whereby the railroad might be able to rise from its present grade at the river entrance to the gulch, thereby seriously impairing the efficiency of an interstate railway with all the legal complications arising therefrom.

In addition to this, most of the commercial industries and the city viaducts, which are west of Sandy Boulevard, would be affected and in some instances would be seriously impaired, to say nothing of the effect upon prospective industries which might be installed.

Third: Railroad grade remaining undisturbed and raising the street grades sufficiently to give train clearance of twenty-two (22) feet, or say a total of twenty-six (26) feet, would require a minimum expenditure by the railroad on its right of way, but would entail a maximum expenditure for viaducts and approaches, greatly increasing abuttal and consequential damages and requiring either steeper gradients on approaches, or increasing lengths of approaches, an average of two hundred and fifty (250) feet.

Fourth: Simple inspection of any one of these three methods of dealing with the situation was sufficient to condemn it, and when all phases were computed from a financial and economic standpoint, each was readily demonstrated to be impractical, leaving the question to be determined only to be the economic relation existing between maximum depression of tracks and maximum elevation of the city streets.

After full consideration had been given to all phases of the problem and after consultation with railroad officials, it was determined that by depressing the tracks an average of eleven (11) feet and correspondingly raising the grade of streets to afford train clearance, none of the viaducts west of Sandy Boulevard would be affected and that present and prospective industries could be served by the railroad as effectively as they now are, though at increased cost of operation to the railroad.

The benefits to the railroad under this procedure will result from uninterrupted movement of their trains within the city limits and to the decrease of liability for damages arising from accidents.

The inconvenience to the public and the damages to abutting property under this procedure will be much gerater than it would be under the first named method, and materially less than under the third named method, whilst, the second named method should be given no consideration.

The original surface of the ground at Sandy Boulevard has been graded down from four (4) to six (6) feet to meet the grade of the railroad and produce a reasonably smooth and gradual approach to the

track. This grade change was made without allowance for damages to abutting property, though much of the property was placed at elevations above the streets. The present project seeks to restore the street level to some of the property, and raises the street level above the original surface of others. For doing this, some of the property owners are asking heavy and unreasonable damages, and did the project seek to fully restore the street to its original relation to surrounding property, still greater damages would be asked.

After the determination of the best and most economic method of separating the grades, the question of viaduct type remained to be ascertained. Studies were made of plate girders spanning the proposed ultimate four (4) track installation, studies of reinforced concrete viaducts, both of girder and continuous slab construction and of concrete encased steel girder beams. The latter method by lending itself to shallow floor system and admitting of pleasing treatment at reasonable cost, presented the logical solution of the problem, and was adopted for the plans.

Collaborating with the City Attorney and carefully following procedure laid down in the City Charter, an agreement was reached whereby the Council determined the relative proportion of the sixty (60) per cent of the total cost of the improvement which would be assessed against the Portland Railway, Light & Power Co., and the Oregon-Washington Railroad & Navigation Co., after which, the latter company filed with the City Auditor an agreement to pay eighty-five (85) per cent of their proportion of the City Engineer's monthly estimate of work performed by the contractor.

Upon the filing of this agreement and its acceptance by the Council, the City Engineer filed with the Auditor, his report, plans, specifications and estimate of cost, since which time the prescribed charter procedure has been carefully followed. Advertisements have been made asking for tenders of proposals for performing this work, which proposals will be received and opened by the Auditor on December sixth, and upon the determination by the Council of the lowest and best responsible bidder, contract will be awarded on February 28, 1917, and will be entered into within ten (10) days thereafter.

Fulton Park Grade Separation—By Ordinance No. 31857, the City Engineer was directed to prepare plans, specifications, estimate of cost and report upon this grade separation. As has been elsewhere noted, plans are in process of development and will be filed during the coming year, but as appropriation for cost of the project has been omitted from the "Budget," it is presumed that contract will not be let, nor work commenced until 1918.

Union Avenue Improvement, from Bryant Street to Columbia Boulevard: As has been noted in Divisional reports, this improvement has been made under plans prepared by this Bureau and constructed under its superintendence, saving the hard surfacing of viaduct and street, which latter has been completed under superintendence of the Bureau of Highways and Bridges.

This improvement has been designed as a connecting link whereby the Inter-State Bridge from Hayden Island to Vancouver, Washington, may be afforded access to the City of Portland over hard surfaced streets and highway, without crossing railroad tracks at grade.

The contract for the reinforced concrete viaduct was signed on January 27, 1916, expiring on May 26, 1916, but on account of inclement

weather and for other causes, the Council extended date of completion until July 18, after which it became delinquent and actually was not sufficiently advanced toward completion to admit of laying the rails of the street railway until September 20, and was not finally recommended by the City Engineer for acceptance by the Council until November 17, 1916.

The contract period of construction was one hundred and twenty (120) days, which period was ample for any contractor properly equipped with construction plant and with adequate organization, but that neither of these essentials were furnished by the firm to whom the contract was let, as is amply evidenced by the daily report of work performed and the photographic record kept. It is sufficient to say that the requirements of the specifications have been fulfilled insofar as strength of structure is concerned, but that the finish leaves much to be desired.

The viaduct and its approaches has been completed and has been turned over to the Bureau of Highways and Bridges for operation and maintenance, note being made that viaduct has not yet been illuminated at night.

Grade Crossing Examinations: The appended table shows the number of grade crossings in the city and explanation has been made in this report as to treatment. It now remains to direct attention to the cumbersome method of separation and the failure to provide means and methods of preserving the City's right and interest in such streets in a grade separation project, as may not be required at the time when the project may be instituted, but which traffic requirements in the future may deem necessary.

First: The Charter provisions require the determination of district which will be benefited in a greater degree than the remainder of the City.

Second: That the cost of the improvement shall be measured by the lines of the City streets, irrespective of the total cost of the project.

I submit that the question is not only "City-wide," but that it is "State-wide," and probably extends beyond the limits of the state.

I submit that the measure of the improvement does not rest within the cost of the improvement measured by street lines.

I submit that the actual measure of cost on which all parties thereto should be assessed should be the actual cost of all the items which enter into the project.

I submit that the fixed proportion which the railroads and railways should bear to the total cost of the improvement should not be left to determination by the Council, but should be definitely stated in an amendment to the charter.

I submit that should State or Federal aid in grade separations be secured, that it should be deducted from the amount of assessment which the municipality should be called upon to bear and should not reduce the amount to be paid by the railroads and railways.

I submit that an amendment to the charter, retroactive insofar as the contemplated work is concerned, be submitted to the voters at the coming municipal election, embodying the above changes.

Respectfully,

GEORGE S. EDMONDSTONE,
Chief, Bureau of Grade Separation.

COMPUTATION FOR TABULATION OF GRADE CROSSINGS

Name of Railroad	Total Streets Crossed	County Roads	Private Crossings	Railroad Crossings	Street Railway Crossings	Existing Structures		IMPROVED ASSINGS					Unimproved No Travel
						Over	Under	Hard Surface	Macadam or Gravel	Graded S. W. & C.	Graded	Plank	
1. Oregon Electric Ry	84	.....	3	2	9	2	4	32	6	.....	.....	2	44
2. S. P. Ry.—Oswego Line	28	1	5	1	3	.....	1	5	.....	.....	.....	7	21
3. S. P. Ry.—O. & C. West Side	61	1	.....	2	4	.....	4	39	9	.....	.....	.....	10
4. S. P. Ry.—O. & C. East Side	46	1	1	.....	6	3	.....	11	17	1	.....	.....	15
5. O.-W.R. & N.—Bridge to Shops	17	.....	.....	.....	.....	.....	.....	4	3	.....	.....	.....	10
6. O.-W. R. & N.—Troutdale Br.	42	.....	4	2	.....	2	1	3	5	2	13	.....	16
7. O.-W. R. & N.—Sullivan Gulch	41	.....	.....	.....	1	6	.....	1	3	2	2	.....	27
8. O.-W.R. & N.—E. 2nd St. Line	22	.....	.....	1	2	1	.....	7	6	.....	.....	2	6
9. O.-W.R. & N.—E. 3rd St. Line	11	.....	.....	1	1	.....	.....	5	6	.....	.....	.....	.....
10. S. P. & S.—E. Water to E. 3rd	6	.....	.....	2	.....	.....	.....	4	2	.....	.....	.....	.....
11. S. P. & S.—Bet. E. 3rd & Union	4	.....	.....	1	.....	.....	.....	.....	4	.....	.....	.....	.....
12. S. P. & S.—E. 2nd St. Line	5	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	4
13. S. P. & S.—Sullivan Gulch	20	.....	.....	.....	.....	4	.....	.....	.....	.....	.....	.....	16
14. S. P. & S.—Big Cut, St. Johns	13	.....	.....	1	.....	4	.....	.....	.....	.....	.....	.....	9
15. S. P. & S.—N. from N. Bank Depot	27	.....	.....	4	.....	.....	.....	4	2	.....	.....	2	19
16. S. P. & S. and N. P. T. Co.—15th St	13	.....	.....	1	.....	.....	.....	.....	13	.....	.....	.....	.....
17. United Rys.—North	50	1	1	1	3	.....	1	39	6	.....	.....	.....	6
18. United Rys.—South	47	1	.....	.....	3	.....	.....	40	1	.....	.....	.....	7
19. Northern Pacific	14	1	13	.....	.....	.....	.....	2	3	.....	.....	2	8
20.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	551	6	27	19	32	23	11	196	86	5	15	15	218

Note: N. P. Co.'s tracks in vicinity of Union Depot not included. O.-W. R & N. Sullivan Gulch line crossings will be eliminated by present proceedings.

ANNUAL REPORT

OF

THE DEPARTMENT OF PUBLIC AFFAIRS

FOR THE FISCAL YEAR ENDING
NOVEMBER 30, 1916

DEPARTMENT OF PUBLIC AFFAIRS

GEORGE L. BAKER
COMMISSIONER

AUDITORIUM

OFFICE OF CITY ATTORNEY
WALTER P. LaROCHE, City Attorney

BUREAU OF CITY HALL
C. S. SIMMONS, Superintendent

PUBLIC EMPLOYMENT BUREAU
N. F. JOHNSON, Director

FREE MUSEUM

BUREAU OF PARKS
JAMES O. CONVILL, Superintendent.

BUREAU OF WEIGHTS AND MEASURES
E. D. JONES, City Sealer

AUDITORIUM

On January 28, 1916, contract was awarded for excavation of foundation for the Auditorium. On February 14th, ground-breaking ceremonies were held, in which City officials and many civic organizations participated.

The general contract was awarded on February 23d. During the year the construction work has proceeded according to schedule, with the exception of six weeks' delay which occurred through unavoidable circumstances.

The corner stone was laid September 14th, on which date the Third Regiment, Oregon Infantry, which had just returned from the Mexican border, were given a reception, and the occasion was made to serve the double purpose of laying the corner stone and welcoming the Oregon troops.

The end of this fiscal year, December 1, 1916, the majority of the special contracts have been let, including a $25,000 pipe organ, the contract for which was awarded the Ernest M. Skinner Organ Company.

OFFICE OF CITY ATTORNEY.

During the year 1916 there were rendered to the various departments of the City of Portland by the City Attorney's office 505 formal written opinions and 783 other written communications. This office has rendered on an average 15 oral opinions each day to the various departments. There were prepared by this office 140 written contracts and approved as to form 221 contracts and 747 bonds.

During the year 1916 there were tried in the Municipal Court 9,699 cases. Ten hearings of the Civil Service Board were attended by this office.

The following is a summary of the court work handled by this office during the year 1916, and of the cases now pending, either wholly or partly prepared for trial:

One case disposed of in the United States Supreme Court.

One case pending in the United States District Court of the District of Oregon.

Fourteen cases disposed of in the Supreme Court of the State of Oregon.

Fifteen cases pending in the Supreme Court of the State of Oregon.

Eighty-three cases disposed of in the Circuit Court of the State of Oregon for the County of Multnomah.

One hundred fifteen cases pending in the Circuit Court of the State of Oregon for the County of Multnomah.

Two cases pending in the District Court for Multnomah County.

Two cases disposed of in the County Court of the State of Oregon for the County of Multnomah.

One case pending in the County Court for Multnomah County.

FREE MUSEUM.

Quite an extensive collection of minerals from Smithsonian Institute were added to the collection now at the City Hall. A polar bear and several interesting specimen of Babylonian tablets were purchased.

BUREAU OF CITY HALL.

The lack of sufficient office space still remains a serious problem; the only apparent remedy being the construction of a floor over the Council Chamber, or additional rooms over wings on the east side of the building. Owing to lack of funds it has not been practicable to undergo this expense at the present time.

Some small repairs and minor adjustment of office rooms on the fourth floor comprised the only material changes. The halls are badly in need of tinting, and the linoleum and carpets in many of the rooms should be removed and suitable floor covering provided.

PUBLIC EMPLOYMENT BUREAU.

On December 1, 1915, the present City Employment Office was established to take the place of the old Free Employment Office, which had struggled along for several years in an indifferent and indefinite fashion.

In recommending the new arrangement, Commissioner Baker had as an advisory committee Charles F. Berg, Father E. V. O'Hara, Marshall N. Dana, Bishop W. T. Sumner, Eugene Smith, Isaac Swett, L. L. Levings, H. L. Corbett and John H. Barbour.

This committee found that the Free Employment Office was not getting results and was not conducted on a business-like basis. It did not have the confidence of employers and was useful mainly in furnishing men employment at odd jobs by the hour. It was recommended that a new institution be created, enlarged and equipped with facilities to properly handle its work, and the name "Free Employment Office" be changed to "Public Employment Bureau."

The committee also recommended that a co-operative arrangement be entered into between the new bureau and the U. S. Government Employment Service. This was later agreed to by the Government, and the arrangement has proven highly satisfactory.

Stress was placed on the matter of the new bureau making a special endeavor to keep the seasonal worker busy as much as possible, as this feature had not been given attention by the former office. Efforts in this direction resulted in the bureau furnishing 8,000 farm workers to various employers throughout Oregon, Southern Washington and Western Idaho.

Sufficient help to carry on the work was another provision made; a director, assistant director, one stenographer and clerk of the Womens' Division were appointed. In addition to supervising the affairs of the Employment Bureau, the director had charge of the Municipal Lodging House. The lodging house and the employment bureau occupy the same building.

The report furnished Commissioner Baker shows that the bureau dealt with approximately 131,784 people seeking employment during the year. It handled orders from 13,644 employers, and sent to bona fide jobs over 35,000 men and women. By comparing its work with that done by its predecessor, the old Free Employment Office, one learns that for the two years preceeding the inauguration of the new bureau, the total number of men and women sent to employment for the TWO years was 15,946.

The old employment office in two years sent people to 98 different occupations. The new bureau supplied workers to 168.

The following table compares the number of people sent to a few of the different occupations by the old and the new employment arrangement:

	1913-1914	1914-1915	1915-1916
Apprentices	.....	4	603
Apple Pickers	.....	.....	1,705
Berry Pickers	8	23	2,020
Farm Hands	177	121	888
Freight Handlers	.....	.....	760
Hop Pickers	.....	71	938
Gardeners	81	60	482
Laborers	6,656	2,317	18,698
Mill Men	7	7	817
Section Men	.....	.....	189

The cost of maintaining the new bureau naturally increased over that necessary to run its predecessor, owing to increased scope of work. The committee so recommended. The old office had no working equipment. Practically no records of its business had been kept. The new plan made it necessary to provide proper office equipment, adequate record books and a general line of office supplies.

By an aggressive campaign of personal calls and letters, the services of the bureau were placed before practically every employer of labor in Oregon and Southern Washington. This campaign resulted in requests for help from banks, railroads, street car companies, practically every large contractor and builder, the majority of the most important lumber mills and logging camps, factories, wholesale houses, boat lines and merchants. Calls now come regularly from these institutions to the bureau to furnish practically every description of skilled and unskilled help.

The bureau has been able to direct the movements of large numbers of people from one section of the state to another to help in the harvest of various kinds of crops. This problem had never before been successfully handled in Oregon. Its activities along this line were instrumental in helping to save the large strawberry and apple crops at Hood River, and, also, a part of the hop and loganberry crop in the Willamette Valley last year.

During the ice and snow storms of last winter, the bureau's organization recruited snow shovelling gangs for the street car lines, railroads and other institutions to the number of 8,000 men. The office was kept open night and day for twelve days.

A Juvenile Department, another special feature of the new work, was in five months instrumental in securing employment for over 600 boys, the greater part of such employment being of a permanent character.

In its enlarged activities, the bureau has been able to offer its assistance to every social organization in the city in endeavoring to secure employment for special cases that came under their care.

BUREAU OF PARKS.

The park system of the City of Portland now embraces approximately fourteen hundred and ten (1410) acres; in addition, the City occupies nearly three hundred (300) acres more of privately owned ground. This private property is used for playgrounds, base ball fields and an eighteen-hole golf course. Almost none of this private property is a charge against the City, as in most instances the owners have loaned it without any remuneration whatever. The propriety of occupying private land, under any circumstances, is debatable, but certain definite results are being obtained, in that some locations are proving natural centers for neighborhood parks, while others, recommended in reports of former years, are proving of doubtful value. Plans are being developed for such tracts as prove desirable, and complete information will be ready at any time should these tracts be purchased.

The 1916 budget provided little except maintenance, but, due to the large number of the unemployed in the city during the winter of 1915-1916, additional funds were provided and large numbers of idle men put to work in the parks. Very fortunately, the appropriations were made on the basis of work units. Some large jobs were undertaken—notably the paving of two miles of drives in Mt. Tabor Park to a width of twenty-seven feet, the digging of Laurelhurst Lake, and a drive about a mile in length, opening up some wonderful views in the undeveloped portion of Washington Park. All this work was under way January 1, 1916, but a heavy snow fell early in the month and the paving was discontinued. By the middle of the month all jobs were running again, but under enormous difficulties. The rock quarry at Kelly Butte was producing very little road material, due to the fact that rock breaking discourages unemployment to an astonishing extent. Work at this rock pile was entirely voluntary, but payment was made on the basis of rock broken and not per hour, and, as a consequence, only those in actual need stayed on the job.

The last week of the month saw one of the heaviest snows ever in Portland. All work was discontinued and the entire available personnel of the Park Bureau was put on the streets to help open up traffic lines. Park employes were placed in charge of gangs, and between eight hundred and a thousand men were given employment every four hours. This enormonus aid made it possible for the regular street cleaning force to restore traffic in four or five days. The Chinook, which melted the snow, also seemed to dissipate the unemployed, for few ever returned to the various jobs, and since the original appropriations had been made on the unit basis, the Mt. Tabor paving was finished by regular park forces and the Laurelhurst Lake by contract. The Washington Park grading job was discontinued, but little inconvenience or loss will be suffered as the fills were carefully drained before laying off forces.

A careful study of the results obtained shows that the Mt. Tabor work cost about four or five per cent additional because of the unskilled labor, while dirt handling at Laurelhurst ran about forty per cent higher. This additional charge is in part due to methods of handling, as loading was by hand while the work was of steam shovel size. Again, dirt work cannot be successfully carried on in low lands

in Oregon during the rainy season. The work at Washington Park ran about twenty-five per cent over estimates.

HOLLADAY PARK

As before stated, little improvement was possible in the parks beyond that due to the utilization of the unemployed. The work started during 1915 was continued in Holladay Park and the lighting system entirely completed, a women's comfort station erected and permanent lawns constructed. The base course of the walks was finished and an additional surfacing should render them passable for many years to come.

SELLWOOD PARK

Walks were laid in Sellwood Park and will be completed as soon as oiled. The lighting system was used for the first time. The buildings about the swimming tank in this park are in very bad condition and should be replaced.

KENILWORTH PARK

In Kenilworth Park the first course on the walks was laid and the completed portion of the walks in this park will be ready for 1917.

Other minor improvements were made in other of the City's parks, but the policy now is to complete the work in units, as the funds available are too small to undertake many permanent improvements.

PLAYGROUNDS

During 1916, all school playgrounds were discontinued, as it had been impossible to make arrangements for the children to use school comfort stations and no drinking water was available. Privately-owned land was secured in the Vernon district and in the Arleta district, however, and attendance records show that these were two of the City's most popular grounds. The Forestry Building playground, started in a small way the year before, proved an immense success; and the Terwilliger playground, opened for the first time, had a remarkable attendance.

The 1916 season was very much shortened by the early summer rains, while the records show that those grounds patronized by the children of migratory workers had a much smaller attendance than in several years. Also, the largest exodus ever noted in the playgrounds took place during the berry and hop picking seasons.

At no place was the decreased attendance more noticeable than in the public swimming tanks. The records show a falling off of forty per cent over 1915. This was due to the extremely cold weather of June and early July. It would be advisable to make a special effort to heat the water sufficiently to break the chill in both the Sellwood and Peninsula tanks. This is especially true at Peninsula, which is the most sheltered.

Tests taken of the water in all pools open to the public showed the park tanks to be the cleanest of any. This result was to be expected, but none the less pleasing.

Steps should be taken to acquire the grounds in Vernon, Arleta and Laurelhurst, as these have all proven by attendance that the locations are admirable.

STREET TREES

The battle with insect pests, undertaken during 1915, was continued during 1916 upon a much larger scale. Due to the extensive

plantings of elm trees in the city, estimated twenty thousand trees, many of large size, the elm leaf beetle has proven a costly foe to fight. The bureau now owns three gas apparatus and these were in use constantly, as the beetle has three distinct periods, and in some cases spraying was done the fourth time. At present the City has no law covering street trees, but police authority over such trees should be provided for the bureau if public funds are to be employed in spraying, etc. Under the present law the bureau can take only remedial measures, while corrective methods are most desirable.

PUBLIC COMFORT STATIONS

The use of the various public comfort stations was much the same as in 1915. No new stations were provided, but the budget committee for 1917 made a wise move when funds were provided for a new station in the vicinity of lower Washington or Alder street. Public funds are wisely spent which provide for the comforts of its citizens at such small cost.

DISTRIBUTION OF EXPENDITURES, 1916

Park	Maintenance			Improvement			Grand Total
	Labor	Material	Total	Labor	Material	Total	
Comfort Stations	5,977.06	2,478.97	8,455.03				8,456.03
All Parks	8,178.99	9,049.24	17,228.23	3,110.31	1,403.55	4,513.86	21,742.09
Benson Park	764.33	169.92	934.25	1,088.91	396.18	1,485.09	2,419.34
Chapman and Lownsdale Sqs.	1,442.35	311.14	1,753.49				1,753.49
Columbia Park	5,576.13	707.41	6,283.54	68.54	144.39	212.93	6,496.47
Forestry Building	1,263.85	56.49	1,320.34	53.00	148.80	201.80	1,522.14
Fountains	554.81	148.06	702.87	49.21	39.13	88.34	791.21
Governor's Park	9.93		9.93				9.93
Holladay Park	1,043.53	95.49	1,139.02	1,742.96	3,265.70	5,008.66	6,147.68
Kenilworth Park	1,323.35	309.81	1,633.16	341.72		341.72	1,974.88
Ladd's Squares	1,354.95	60.32	1,415.27				1,415.27
Laurelhurst Park	4,386.49	458.00	4,844.49	6,948.53	7,013.29	13,961.82	18,806.31
Macleay Park	752.18	1.00	753.18				753.18
Mt. Tabor Park	4,022.39	1,770.43	5,792.82	12,238.49	21,759.79	33,998.26	39,791.10
North Park	1,143.95	112.37	1,256.32	18.34		18.34	1,274.66
Peninsula Park	5,400.95	346.21	5,747.16	263.74	42.24	305.98	6,053.14
St. Johns	21.44	193.79	215.23				215.23
Sellwood Park	1,761.29	50.18	1,811.47	831.78	2,951.64	3,783.42	5,594.89
Sellwood Playground	7.00		7.00				7.00
South Park	1,923.33	542.64	2,465.97				2,465.97
Terwilliger Boulevard	3,028.06	656.67	3,684.73	160.28	18.28	178.56	3,863.29
Washington Park	8,127.88	1,323.10	9,450.98	6,237.77	281.47	6,519.24	15,970.22
Street Trees	1,664.57	1,192.20	2,856.77	340.08	181.93	522.01	3,378.78
Zoo	2,899.92	4,415.56	7,315.48	73.91	120.35	194.25	7,509.74
Miscellaneous	11,285.46	10,053.77	21,339.23				21,339.23
Total	73,914.19	34,502.77	108,416.96	33,567.57	37,766.74	71,334.31	179,751.27

NOTE: Office expenditures, $2,584.76 not included in above statement.
The item, "Miscellaneous," above includes expenditures for shoveling snow, etc., from which parks derived no benefit.

DISTRIBUTION OF EXPENDITURES, 1916—Continued

Playground	Maintenance			Improvement			Grand Total
	Labor	Material	Total	Labor	Material	Total	
All Playgrounds	514.53	500.46	1,014.99	10.13	3,490.69	3,500.82	4,515.81
Albina Field House	279.51	700.67	980.18				980.18
Arleta Playground	403.71	13.20	416.91	340.00	779.32	1,119.32	1,536.23
Brooklyn Playground	1,534.76	137.11	1,671.87	19.88	5.14	25.02	1,696.89
Columbia Playground	633.11	12.93	646.04	244.78	9.54	254.32	900.36
Kenilworth Playground	13.77	5.11	18.88	601.02		601.02	619.90
Lakeview (Forestry Bldg.)	652.94		652.94	654.86	30.70	685.56	1,338.50
Laurelhurst Playground	608.48	7.52	616.00	657.73	621.48	1,279.21	1,895.21
Lents Playground	930.33	258.75	1,189.08	126.11	83.10	209.21	1,398.29
Lincoln Playground	1,600.48	40.39	1,640.87				1,640.87
Mt. Tabor Playground	494.72		494.72	1,063.13	881.72	1,944.85	2,439.57
North Park Playground	534.05		534.05	62.02	107.11	169.13	703.18
Peninsula Playground	4,811.71	1,600.40	6,412.11	91.08	3.50	94.58	6,506.69
Sellwood Playground	1,539.68	536.44	2,076.12	141.82	5.10	146.92	2,223.04
Terwilliger Playground	483.32		483.32	234.58	148.15	382.73	866.05
Vernon Playground	596.94	575.36	1,172.30	995.81	478.06	1,475.87	2,647.16
Washington Playground	685.37	6.25	691.62				691.62
Miscellaneous	1,733.48	41.21	1,774.69				1,774.69
Total	18,050.89	4,435.80	22,486.69	5,242.95	6,643.61	11,886.56	34,373.25

NOTE: Items of labor under Playground Maintenance include salaries of Playground Directors, total of $10,330.12.

ATTENDANCE PUBLIC PLAYGROUNDS, 1916

Playground	June		July		August		September		Total		Grand Total
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	
Arleta, July 3, Sept. 4	.....	.....	4,785	7,640	4,145	8,400	170	403	9,100	16,443	25,543
Brooklyn, June 10, Sept. 4	2,335	1,842	3,479	2,718	3,375	3,255	275	295	9,464	8,110	17,574
Columbia, June 10, Sept. 4	1,788	1,762	8,162	8,592	3,364	3,503	125	260	13,439	14,117	27,556
Forestry Bldg., June 10, Sep.4	621	465	2,288	1,859	2,368	1,810	225	175	5,502	4,309	9,811
Kenilworth, June 10-Sept. 4	2,060	1,667	3,868	3,279	3,740	2,895	305	185	9,973	8,026	17,999
Laurelhurst, June 10-Sept. 4	1,027	1,014	3,160	5,948	3,745	6,816	280	665	8,212	14,443	22,655
Lents, June 10-Sept. 4	2,142	1,778	4,039	3,426	3,504	3,042	202	213	9,887	8,469	18,346
Lincoln, June 10-Sept. 30	2,845	2,148	4,215	3,942	6,195	5,640	1,575	1,953	14,830	13,683	28,513
Mt. Tabor, June 10-Sept. 4	718	772	1,626	1,727	1,789	1,793	50	52	4,185	4,334	8,517
North Park, June 10-Sept. 4	1,450	2,264	2,630	4,172	1,888	4,434	178	480	6,146	11,259	17,405
Peninsula, May 11-Sept. 30	5,373	5,467	13,430	14,260	12,005	15,200	1,079	1,570	31,887	37,497	69,384
Sellwood, June 10-Sept. 4	2,571	1,867	6,808	7,979	6,668	8,784	393	85	16,440	18,715	35,165
Vernon, June 17-Sept. 4	822	464	6,859	6,229	4,818	5,069	306	300	12,805	12,062	24,867
Washington, June 10-Sept. 4	833	783	2,326	2,493	2,091	2,397	202	218	5,452	5,891	11,343
Terwilliger, July 20-Sept. 4	.....	.....	1,341	1,133	4,482	3,310	116	142	5,939	4,585	10,524
Total	24,585	22,293	69,016	75,397	64,177	77,247	5,481	6,996	165,259	181,933	345,132

ATTENDANCE SWIMMING TANKS, 1916

	Boys	Girls	Total
Multnomah, June 22-July 31, boys 17 days, girls 17 days	770	549	1,319
Peninsula, June 17-Sept. 4, boys 40 days, girls 39 days	10,601	9,697	20,298
Sellwood, June 17-Sept. 4, boys 31 days, girls 39 days	10,475	13,537	24,012
Total	21,846	23,783	45,629

ATTENDANCE PUBLIC COMFORT STATIONS, 1916

Month	10th & Yamhill	6th & Yamhill		Total
	Men	Men	Women	
December, 1915	20,284	69,040	17,956	107,280
January, 1916	23,037	62,167	12,068	97,272
February, 1916	21,851	63,325	17,715	102,891
March, 1916	22,416	66,815	18,656	107,887
April, 1916	21,362	73,158	23,013	117,533
May, 1916	21,964	75,634	23,211	120,809
June, 1916	21,698	87,387	32,933	142,018
July, 1916	18,352	79,800	25,840	123,992
August, 1916	16,997	73,961	22,431	113,389
September, 1916	17,006	80,273	29,619	126,898
October, 1916	17,778	82,167	27,119	127,064
November, 1916	17,505	76,748	24,474	118,727
Total	240,250	890,475	275,035	1,405,760

RECEIPTS—SIXTH AND YAMHILL

MEN		WOMEN	
Jan. 19	$6 .25	Feb. 1	$ 1.85
Mar. 14	4.77	Mar. 13	4.40
May 16	5.40	May 13	5.75
Aug. 11	9.06	June 16	11.15
Sept. 27	6.10	Aug. 11	6.11
Nov. 16	8.85	Aug. 23	2.75
	$40.43	Aug. 29	3.45
		Sept. 27	11.45
		Oct. 30	6.60
		Nov. 27	5.00
			$58.51

ATTENDANCE RECREATION BUILDING, 1916

Month	Men and Boys' Classes	Women and Girls' Classes	Special	Total
December, 1915	1,084	1,307	2,366	4,757
January, 1916	848	927	1,405	3,180
February, 1916	732	1,249	1,449	3,430
March, 1916	1,113	2,284	1,974	5,371
April, 1916	1,003	2,029	1,413	4,445
May 1-10, 1916	267	454	524	1,245
October 9-31, 1916	1,092	2,212	889	4,193
November, 1916	1,089	2,172	875	4,136
Total	7,228	12,634	10,895	30,757

ATTENDANCE ARLETA SCHOOL CLASSES

Month	Boys	Girls	Total
March, 1916	379	.....	379
April, 1916	384	.....	384
October 14-31, 1916	132	28	160
November, 1916	249	237	486
Total	1,144	265	1,409

ATTENDANCE MUNICIPAL BAND CONCERTS, 1916

July 3—South Park	1,500
July 4—Vernon	2,500
July 4—Woodstock	500
July 5—Laurelhurst	2,000
July 6—Peninsula	1,500
July 7—Columbia	1,500
July 9—Washington	2,000
July 10—South Park	1,800
July 11—Lents	2,200
July 12—Forestry Building	1,200
July 13—Sellwood	1,600
July 14—Holladay	1,500
July 17—South Park	2,000
July 18—Terwilliger Park	2,500
July 19—Mt. Tabor	1,200
July 20—Kenilworth	1,500
July 21—Brooklyn	2,000
July 23—Washington	1,500
July 24—South Park	3,000
July 25—Peninsula	2,000
July 28—Arleta	2,500
July 29—St. Johns	1,000
July 30—Washington	1,500
July 31—South Park	4,000
Aug. 1—Holladay	2,200
Aug. 2—Sellwood	1,500
Aug. 3—Mt. Tabor	2,500
Aug. 4—Laurelhurst	2,000
Aug. 6—Washington	1,600
Aug. 7—South Park	2,500
Aug. 9—Lents	1,800
Total	58,600

BUREAU OF WEIGHTS AND MEASURES.

The major portion of the errors found in scales were due to lack of balance, cheap or worn construction, dirt interfering with the free movement of parts, or failure to keep the scale in level. This latter fault is particularly noticeable in scales which are moved about from place to place to suit the convenience of the user. A constant effort has been made to improve conditions under which scales are used, and it is proper to state that the majority of scale users pay more attention to the correct maintenance and operation of scales than was formerly the case.

A test of automatic pumps and tanks used in the sale of gasoline, kerosene and lubricating oils has been carried on throughout the year. In most cases the errors found in these automatic devices were small, running both under and over standard measures; but it is believed that when properly operated their use results in greater accuracy than could be obtained through the use of capacity measures.

More wood was measured during the past year than during any previous year, and on the whole much greater care was given by dealers to the question of measurement than ever before, and while some shortages were found, it is also true that we quite frequently found that wood measured in excess of the amount billed.

A considerable number of complaints relative to the giving of short weight or measure in trade were investigated, and an effort was made to see that the law was complied with. Settlements were made on the basis of weight or measure suggested by this bureau in the majority of cases.

An increasing number of requests are being made for certificates of the weight or measure of various commodities, and while such work does not come strictly within the duties of this bureau, an effort has been made to be of as much service as possible to the community. An ordinance to cover this phase of the work will be presented to the Council at an early date, in which an effort will be made to place this City on an equality with other cities in this respect.

Recognizing existing economic conditions, we have been slow to recommend additional help for this bureau, but it is believed that the time is not far distant when it will be imperative that additional help be provided if the work is to be properly performed.

Scales tested, found accurate and sealed	2,415
Scales tested, adjusted and repaired	160
Scales ordered repaired	152
Scales condemned	95
Total scales tested	2,822
Weights found accurate and sealed	751
Weights condemned	31
Total weights tested	782
Automatic pumps and tanks sealed	163
Automatic pumps and tanks ordered repaired	30
Automatic pumps and tanks adjusted or repaired	41
Automatic pumps and tanks condemned	3
Total automatic pumps and tanks	278

Wood measured	7,903	cords
Coal reweighed	23,082	pounds
Hay reweighed	8,000	pounds
Automobile sand and gravel trucks measured and certified	38	
Sand and gravel wagons measured and certified	49	
Barrels measured	10	
Wood trucks measured	6	
Vegetable oil weighed	8	cars
Aluminum weighed	2	cars

The following complaints were filed in the Municipal Court:

Short weight in briquettes	3
Found guilty and fined $10.00 each	3
Short weight in coal	1
Found guilty and fined $20.00	1
Giving underweight in buying junk	1
Found guilty and fined $10.00	1

ANNUAL REPORT

OF

THE DEPARTMENT OF PUBLIC UTILITIES

FOR THE FISCAL YEAR ENDING
NOVEMBER 30, 1916

DEPARTMENT OF PUBLIC UTILITIES

WILL H. DALY
COMMISSIONER

BUREAU OF WATER WORKS—
L. S. KAISER, Superintendent
D. D. CLARKE, Engineer.

BUREAU OF STREET CLEANING—
ALEX DONALDSON, Superintendent

BUREAU OF GARBAGE DISPOSAL—
WM. G. HELBER, General Foreman

MUNICIPAL LIGHTING—
C. F. WIEGAND, Clerk

POLE ELIMINATION.

MOTOR BUS INSPECTION.

DEPARTMENT OF PUBLIC UTILITIES.

To the Honorable Mayor and Council:

I have the honor to submit the report of the Department of Public Utilities for the fiscal year ending November 30, 1916, consisting of the following reports:

Bureau of Water Works.
Bureau of Street Cleaning.
Lighting.
Pole Elimination.
Bureau of Garbage Disposal.
Motor Bus Inspection.

ANNUAL REPORT OF SUPERINTENDENT OF WATER BUREAU

Mr. Will H. Daly, Commissioner of Public Utilities, City Hall:

Dear Sir: With the closing of another year's business, I take pleasure in transmitting to you a copy of Chief Clerk Chessman's annual report. Although rather voluminous, it is a most interesting and comprehensive account of the various activities of the Revenue Division. I, therefore, submit it in full for your perusal.

I also submit a report of conditions existing in the Bull Run Reserve at the Headworks, along the pipe lines and at the various reservoirs, standpipes, tanks, basins and yards located within the city. Having in mind, at all times, the betterment of the water system, I respectfully make certain recommendations for your consideration.

BULL RUN RESERVE

Fires and Fire Guards

During the past year the Bull Run Reserve was free from fires, with the exception of a brush fire which entered the reserve from Truman's place during the month of October, which burned over an area in the reserve of about one hundred acres to and around Sugar Loaf Mountain. As the timber on this tract of land was destroyed by fire several years ago, no damage was sustained by the recent fire. In fact, it was beneficial to the extent of burning up much of the dead timber, which, unless entirely destroyed, may be the means of aiding a fire to enter the green timber some four or five miles distant.

With the close of the past season, our patrolmen reported that 1,482 persons were either refused admission or turned back after entering the reserve.

As the government is opening up the Cascade Reserve more and more each year by trails, parks and by allowing the public to lease land for a term of years for summer homes, at a nominal rental, it will soon be necessary for the City to clear a strip of land from 100 to 150 feet in width, designating the boundary lines of the reserve. For the reasons above mentioned, I would recommend that two or

three strands of barbed wire be run around the entire Bull Run Reserve. With trespass notices posted, campers, fishermen and hunters would have no excuse to offer, as now, when found trespassing on the reserve. As hundreds of persons each year are prevented from entering the reserve by way of the Clear Fork trail by our guard, and, as it is necessary to keep this entrance guarded longer during the year than other trails, owing to its accessibility, I would recommend that a suitable dwelling of two or three rooms be built of rough lumber and water piped to the same, in order to secure reasonable comfort for the guard on duty.

Timber

As mentioned in a former report, "The Cameron and Taylor Lumber Company are now operating a sawmill near Section 27, 1 South, 5 East. This property is not on the watershed of the reserve, nor is the north half of Section 5, 2 South, 5 East. From reports from several sources, I learn that this timber is now over-ripe and should be cut. If allowed to stand, there is always the danger of fire destroying it and entering further into the reserve. I would suggest that this timber be disposed of or the property traded for private property, just as well timbered, within the reserve and on the Bull Run River above the Headworks."

Temporary Telephone Line Above Headworks

A temporary telephone line was extended up the river from the Headworks a distance of about four miles. The wire was strung on trees using small pieces of old rubber hose for insulator and ground connection for return.

By using old discarded wire and borrowing two telephones from the Pacific Telephone Company at Gresham at 25 cents each per month, the entire cost of the line did not exceed $25.00. This line proved to be of great value in keeping in closer touch with the two guards located on the North and South forks of the Bull Run River.

Headworks

Due to the unusual quantity of snow and to heavy rains, there has at no time during the past summer been any danger of a shortage of water at the Headworks. The lowest stage of the river last summer showed 132 second feet, which is about 24 second feet more than the capacity of the two conduits.

The lawns around the gatemen's houses have been kept in good condition, considering the scarcity of dirt on which the grass roots have to grow. The houses recently built at the Headworks are in good shape, only minor repairs being made during the past year.

Just above the canal, at the Headworks, many immense boulders were blasted and removed. This deepens the channel and gives the water an unobstructed flow into the canal, and, except at extreme low water, makes a temporary dam unnecessary.

Bridges

The three bridges carrying the two conduits have been scraped and painted wherever any signs of rust have appeared. Considering the time elapsed since painting these bridges, the paint is in excellent condition.

CONDUIT NO. 1

A section of Conduit No. 1, east of Kelly Creek, should receive attention in the immediate future. This conduit, at the foot of Lusted's Hill, has shown several leaks caused by the pipe pitting. These leaks

were repaired from the inside of the pipe at a very much less expense than making the repairs from the outside. No trouble has been experienced with the section of pipe repaired just east of Gresham two years ago.

CONDUIT NO. 2

On March 29, 1916, at 5 P. M., a riveted joint on Conduit No. 2 sheared, due more or less to a settling of a cement pier or a movement of the hillside. This joint was near the large apron across the pipe line west of the town of Bull Run. In order to test out the merits of "leadite" in caulking steel pipe, I requested Inspector Maupin to use "leadite" instead of lead. This joint has held, but has leaked considerably at times, due to changing the flow in the pipe line and the slight movement of the hillside. After six months' trial the water was shut off and a lead expansion joint was made which has proven satisfactory. As many of the concrete piers supporting No. 2 conduit at this point are cracked and show some settlement, I would recommend that new piers be built in the near future at a greater depth. During the snow storm last winter on Lusted's Hill, the three-inch tiling under Conduit No. 2 became blocked and caused the filling to wash away for a distance of 400 feet along the conduit. The three-inch tiling was replaced by tiling 6 inches in diameter, placed on heavy boards and the trench refilled.

PORTLAND RAILWAY, LIGHT AND POWER COMPANY'S FLUME

The flume of the above named company, which parallels the two conduits for a short distance west of the town of Bull Run, has not broken during the past year. The Railway Company, at considerable expense, has constantly employed men to keep the flume in repair. However, there is still considerable leakage along the hillside, appearing below the pipe lines, which apparently comes from the flume.

PORTLAND RAILWAY, LIGHT AND POWER COMPANY'S RESERVOIR

This reservoir, which covers an area of about 160 acres when full, has, like the Portland Railway, Light & Power Company's flume, always been looked upon by employes of this bureau as more or less of a menace to the pipe lines. The soil surrounding the reservoir is saturated with water to a considerable depth. The soil in this condition is liable to settle or slide and cause great damage to the two conduits unless drains of ample size are provided. Undoubtedly this work should be performed, and the expense borne, by the Portland Railway, Light & Power Company.

TELEPHONE LINE

During the sleet and snowstorm last winter, when telegraph and telephone poles were down in all directions, the City lost only three poles betwen the city limits and Gresham, and six poles east of Gresham. Inspector Maupin has repaired and replaced poles on the Section Line Road and he is hopeful that the line will stand another winter, but recommends that the line from Eighty-second Street east to Gresham be rebuilt during the year 1917, as the poles are rotting and in more or less of a dangerous condition.

SANDY RIVER CROSSING

As an experiment, I instructed Inspector Maupin to attempt to change the channel of the Sandy River by removing boulders and gravel in the center of the stream. This has been done at a cost of less than $40.00. As the river rises and cuts its way through this new

channel, I am convinced that the sand, gravel and rock will be forced to the west, thus forming a sand and gravel bar, making it unnecessary to rebuild the dike of piling, which was built about fifteen years ago at an outlay of about $15,000, and which is now practically rotted away, affording little or no protection to the west piers of the Bull Run pipe line bridge and the new county bridge across the Sandy River.

SALMON IN BULL RUN RIVER

For many years salmon have been running up the Bull Run River. After spawning, the most of the salmon die and there is more or less danger of the dead fish contaminating the water. I have asked for and have received permission from Master Fish Warden Clanton to build a fish rack at the mouth of the Bull Run River. This would turn the salmon up the Sandy River. Mr. Clanton thought that this would be an excellent scheme, assuring me on several different occasions that this plan met with his hearty approval. As the cost would not exceed $200.00 (estimated), and as the yearly maintenance would only be about $100, I would recommend that this work be done as a further means of protecting the water supply of this city.

Statement showing cost of operation, maintenance and construction during 1915 and 1916 of Bull Run Reserve:

	1915	1916
Personal Service—		
Guards, government pay roll	$ 999.50	$ 976.17
Guards, city pay roll	1,356.00	1,271.00
Total	$ 2,355.50	$ 2,247.17
Badges	12.00	.....
Lumber	2.15	.....
Saddle Horses	25.00	.....
Total	$ 2,394.65	.....
Maintenance	202.73	503.57
Total	$ 2,597.38	$ 2,750.74
Surveys and explorations (Construction)	12,184.19	6,227.58
Total	$ 14,781.57	$ 8,978.32

PALATINE PUMPING STATION

Conditions are unchanged at this station. The boilers and pumps are kept in repair by Engineer Leslie, who lives in the dwelling on the premises and visits the building nearly every day. The pumps are operated for a few hours three or four times during the year, in order to test out the valves and properly oil the machinery. It is a difficult matter to drain the water from the hillside which seeps through the west walls without spending considerable money, which would not be advisable at this time.

The woodwork about the building is fast decaying. In 1915, after tramps entered the building and removed several hundred dollars' worth of brass, oil cups, steam gauges, etc., I instructed General Foreman Gray to thoroughly barricade the windows and doors; since then we have not experienced any more trouble from that source.

The tract of land, consisting of about ten acres, located just west of the county road at this station, should be sold or traded, if possible, when a new reservoir site is purchased.

VERNON STANDPIPE

This standpipe should be repainted this year; it should also be protected in some manner to prevent boys from marring the paint by throwing stones at it as a pastime. The standpipe is covered with hundreds of rust spots, where the paint has been knocked off in the manner above mentioned.

PORTLAND HEIGHTS TANK

Since building a dry wall in front of this tank to protect the bank, part of the fence has been removed. I think it would be well to rebuild the fence with a more substantial one to prevent children, living in the neighborhood, from using these premises for a playground, and thus destroying the rose bushes, shrubbery and lawn.

MOUNT TABOR TANK

As this tank has a concrete cover and it is located in Mt. Tabor Park, where many people congregate during the summer months, walking and standing on this cover, I would suggest that the ground set aside for this tank be properly fenced.

RESERVOIR NO. 2

Although a considerable amount has been expended in repairing the bottom of this reservoir, it is far from being water tight. It is only a matter of time when the present bottom will have to be removed to be replaced by a substantial concrete bottom, after the ground, which appears to be very uneven, is well rolled.

RESERVOIR NO. 3

The repairs made to the dam by F. B. Gilman Company, as per contract of August 11, 1916, were made in accordance with said contract and the time allowed the city for testing purposes by said contract will not expire until next March. It appears, however, that the dam is not water tight and it will, therefore, be necessary for the above named company to make another attempt to repair the wall.

RESERVOIRS NOS. 5 AND 6

When these reservoirs were planned, provision was made for suitable stairways leading to each. As the grounds and banks were not well settled at that time, temporary wooden walks and steps were constructed. These walks and steps have always been unsightly and are now fast decaying. The building of new walks and steps, as originally planned, would add materially to the appearance of these reservoirs, which are visited by thousands of people each year.

OFFICE AND WAREHOUSE BUILDING AT EAST SEVENTH AND ALDER STREETS

This building, located at 123 East Seventh Street, should be cleaned and the interior should be tinted and the woodwork revarnished, as no repairs have been made to this building since its erection in 1909.

VACANT PROPERTY

This bureau owns quite a number of pieces of vacant property, which are only a source of expense for street improvements, removing weeds, etc. Like the property at Palatine Hill, I believe these parcels of land could be sold or traded for some suitable location, where a commodious warehouse, workshop, garage and substation could be erected; such a building would be of great value to this bureau and would enable us to give more economical service.

MOTOR VEHICLES

Unless some extensive improvements are contemplated in the near future, I think our present equipment is adequate for the coming year. I would advise, however, that some of our motor vehicles, which have been in service for the past five years, be traded in on new and lighter and more economical equipment. The three one-ton Federal trucks and the four Menominee trucks could be replaced by one 2-ton, shaft-driven truck, which could do all the moderately heavy hauling, and six light trucks of some standard make. This would materially reduce the expense of upkeep and would also reduce the expense of repairs to the trucks. During the year 1916, the repairs to Federal Truck No. 3 amounted to $903.33.

METER DIVISION

During the past year Mr. Figgins has conducted this division in a very satisfactory manner, installing, changing, removing and repairing meters at a very low cost compared with work of this nature in other cities of about the size of Portland.

It would be more economical to dipsose of the horse and wagon now used in this work for a light Ford truck. It costs about $275.00 per annum for the board and shoeing of the horse and repairs to the wagon. One-third more work could be accomplished in the same time with a light truck, as the horse is so slow in covering the ground. When we consider the wages of the two men on this wagon ($6.75 per day), I think you will agree with me that it adds considerable expense to the work of this division.

ST. JOHNS AND LINNTON DISTRICTS

As I have already made certain recommendations as to the St. Johns system, under date of December 11, 1916, I will not repeat them in this report. Considerable repair work is being done by Assistant Foreman Dowling in these districts.

The curb-cock boxes installed by the St. Johns Water Works & Lighting Company are of a very cheap and inferior make, and we are replacing the same by our regular cedar boxes, dipped in carbolineum, with iron covers, which gives us better access to the stopcock. We also find that about one-third of the services in the St. Johns district are not provided with curbcocks. We are notifying property owners to provide proper curbcocks, and thus far have met with little opposition. This condition also existed at Linnton, but has been corrected.

In the Linnton district all services have been metered, except the West Oregon Lumber Company and the Willamette Box and Lumber Company, which have been shut off the main and the pipes disconnected, they having refused to install meters. The Clark-Wilson Lumber Company have been notified several times to install a 6-inch meter on its fire line, but thus far have neglected to do so. This matter has been referred to and is under consideration at your office.

IN CONCLUSION

A few months hence, your Superintendent will begin his twenty-fourth year in the service of the Bureau of Water Works of this city. During this time he has witnessed the growth of the water system from a small plant pumping water from the Willamette River, supplying only the west side of the river and valued at $1,723,969.64, to the present Bull Run gravity system, as shown by the last annual statement, of $12,275,186.47, supplying now the entire City of Portland, including the former towns of St. Johns, Linnton, Lents and Sellwood

and the towns of Gresham and Milwaukie, Oregon. On the West Side, during this period, the City purchased the plant of the Portland Heights Water Company. The Willamette Heights and Kings Heights systems, costing about $20,000.00, were deeded by the owners to the City without cost. On the East Side, the City acquired by consolidation the East Portland Water Plant and by purchase the Albina Light & Water Company's plant, the Mount Tabor Light & Water Company's plant, the McGuire, Fleck, Woodmere and Piedmont systems and other smaller systems.

The reorganization of the working forces of the bureau, as perfected about three years ago, has resulted in bringing the work up to a higher standard and has produced more pleasant relations between fellow-employes where discord and chaos reigned. With only a few exceptions, and these occasioned by selfish interests, the employes of this bureau have manifested a spirit of loyalty and co-operation.

In closing, I wish to express my sincere appreciation for your impartial decisions, counsel and hearty support while administering the affairs of this bureau.

Respectfully,

L. S.KAISER,
Superintendent.

Mr. Will H. Daly, Commissioner of Public Utilities:

Dear Sir: The following shows the condition of the meter division for the fiscal year ending November 30, 1916:

There are 15,957 meters in service belonging to the City of Portland, and 1,029 private meters which belong to the consumers, making a total of 16,986, an incerase of 1,491 meters over the fiscal year ending November 30, 1915. The meters in service, 15,957, and the meters in our shop at Fourth and Market Streets, numbering 255, make a total of 16,212 meters which belong to the City of Portland.

During the year, 850 Watchdog meters were purchased from the Gamon Meter Company at $6.50 each, making a total of $5,525.00; 299 Keystone meters were purchased from the Pittsburg Meter Company at $5.70 each, making a total of $1,704.30; a grand total of 1,149 meters, amounting to $7,229.30.

Two Hersey meters and one Trident meter were made the property of the City of Portland by bill of sale by three consumers, who desired their services to be metered.

During the year, 1,802 meters (108 private) were set at places not previously metered at an average cost of $2.78 each, amounting to $4,709.17; 896 meters were changed at an average cost of 63 cents each, amounting to $561.62, and 449 meters (34 private) were taken out at an average cost of 54 cents each, amounting to $225.66.

Through the annexation of the St. Johns water works, the meters in service were increased by 138.

During the year 1,357 meters were repaired at an average cost of $1.23 plus, amounting to $1,679.05. This amount, proportioned to the total number of 15,957 city meters in service, averages $0.106 plus each for maintenance.

Respectfully,

L. S. KAISER,
Superintendent.

P. S.—The above information and statements, hereto attached, should have been included with my Annual Report, and should be made a part thereof.

METERS IN SERVICE NOVEMBER 30, 1916

	OWNED BY CITY								OWNED BY CONSUMERS											
Size, inches...	5/8	3/4	1	1 1/2	2	3	6	Total	5/8	3/4	1	1 1/4	1 1/2	2	3	4	6	8	Total	Gr'nd Total
Trident	7,691	509	328	14	16			8,558	275	3	20		39	47	9	1			394	8,952
Worthington	5,194	149	139					5,482	55	1	1		3	3					63	5,545
Hersey	356							356	218	1	6	1	6	1					233	589
Crown	122	15	7		10			154						2		2			4	158
Badger	49							49	42										42	91
Standard	7							7												7
King	24							24												24
Nash	50	35	24					109					1						1	110
Empire	42	7	2	1				52												52
Keystone	301	5						306	1										1	307
Watchdog	848	1						849												849
Enarc	1			1				2	11	2	1	1	4	1					20	22
Niagara									3										3	3
Crest				1	6	1		8					32	121	18	6	2		179	187
Protectus Cmp.																	2		2	2
Trident Cmp.													6	38	12	14	1	1	72	72
Empire Cmp.							1	1								1			1	2
Hersey Cmp.														6	4	1	2		13	13
Gem Cmp.															1				1	1
	14,685	721	500	17	32	1	1	15,957	605	7	28	2	111	219	44	25	7	1	1,029	16,986

METERS ON HAND NOVEMBER 30, 1916

	Meters on Test	⅝-in.	¾-in.	1-in.	1½-in.	2-in.	4-in.	Total
Crown		32	8	8		12		60
Columbia		21						21
Standard		8	1	1				10
Worthington	1	48	3	14				66
Nash	4	1	3	2				10
Empire		1	3	3				7
Hersey	2	3						5
Watchdog	2	1						3
King		1						1
Badger	1	1						2
Keystone	3	8	1	3				15
Trident	2	24	2	2	2	4		46
Trident Crest						4	2	6
Lambert	1							1
Enarc	1							1
Trident Com'p						1		1
Total	17	149	31	33	2	21	2	25

COST OF SETTING METERS, 1916

	No. Set						Average Cost	
	Private	City	Total	Labor	Wagon	Material	Total	Total Cost
December, 1915	14	129	143	$1.38	$ .42	$1.08	$2.88	$ 371.29
January, 1916	6	47	53	1.33	.40	1.11	2.84	133.71
February	6	141	147	1.19	.36	1.09	2.64	371.61
March	7	163	170	1.22	.36	.95	2.53	415.25
April	3	135	138					
	11	62	73	1.32	.39	.89	2.60	158.76
May	10	72	82	1.43	.42	1.27	3.12	225.10
June	7	225	232	1.26	.38	1.10	2.74	617.11
July	7	305	312	1.26	.37	1.16	2.79	851.23
August	19	395	414	1.25	.38	1.21	2.84	1,118.09
September	5	63	68	1.47	.44	.99	2.90	182.74
October	7	32	39	1.42	.42	1.22	3.06	98.09
November	9	60	69	1.30	.40	1.07	2.77	166.19
	*3	*1,35	*1,38					
Totals	108	1,694	1,802			Average.	$2.78	$ 4,709.17

*Acquired by annexation of St. Johns.

COST OF CHANGING METERS, 1916

	Number Changed			Cost of Changing Meters				
	Private	City	Total	Labor	Wagon	Material	Total	Total Cost
December, 1915	.....	87	87	$ .58	$ .17	.....	$ .75	$ 64.94
January, 1916	.....	76	76	.50	.15	.....	.65	49.69
February	.....	56	56	.49	.16	.....	.65	36.24
March	.....	94	94	.45	.13	.....	.58	54.16
April	.....	77	77	.44	.14	.....	.58	44.68
May	.....	84	84	.51	.15	.....	.66	55.25
June	.....	54	54	.48	.15	.....	.63	33.93
July	.....	64	64	.51	.14	.....	.65	40.82
August	.....	68	68	.46	.14	.....	.60	41.43
September	.....	86	86	.44	.13	.....	.57	49.54
October	.....	83	83	.44	.14	.....	.58	48.64
November	.....	67	67	.48	.15	.....	.63	42.30
Total	.....	896	896	.....	.....	Average.	$0.63	$ 561.62

COST OF TAKING OUT METERS, 1916

	Number Taken Out			Average Cost				
	Private	City	Total	Labor	Wagon	Material	Total	Total Cost
December, 1915	4	31	35	$ .40	$ .12	.....	$ .52	$16.27
January, 1916	6	18	24	.44	.14	.....	.58	10.88
February	4	16	20	.41	.12	.....	.53	8.46
March	1	29	30	.30	.09	.....	.39	11.20
April	2	48	50	.44	.14	.....	.58	27.52
May	2	28	30	.50	.16	.....	.66	18.61
June	4	17	21	.42	.13	.....	.55	11.57
July	2	38	40	.47	.14	.....	.61	24.45
August	1	27	28	.40	.13	.....	.53	14.34
September	1	34	35	.37	.12	.....	.49	16.74
October	4	87	91	.36	.10	.....	.46	40.55
November	3	42	45	.46	.14	.....	.60	25.07
	34	415	449			Average..	$ .54	$225.66

METERS SET MONTHLY, 1916

	Number Set	Number Changed	Total	Number Taken Out	Net Gain or Loss
December, 1915	143	87	230	122	108
January, 1916	53	76	129	100	29
February	147	56	203	76	127
March	170	94	264	124	140
April	*138	.....	*138	.....	*138
	73	77	150	127	23
May	82	84	166	114	52
June	232	54	286	75	211
July	312	64	376	104	272
August	414	68	482	96	386
September	68	86	154	121	33
October	39	83	122	174	−52
November	69	67	136	112	24
	1,940	896	2,836	1,345	1,491

*Acquired by annexation of St. Johns.

ANNUAL REPORT OF CHIEF CLERK BUREAU OF WATER WORKS, PORTLAND, OREGON, FOR THE FISCAL YEAR ENDING NOVEMBER 30, 1916

Mr. L. S. Kaiser, Supt. Bureau of Water Works, City:

Dear Sir—At the close of business November 30, 1916, another year's activity has been added to the history of the Bureau of Water Works. As the above marks the end of the second year of operation under the system of "billing quarterly after service," I desire to state at the beginning that the many problems arising through the introduction of this system were largely solved during the first fiscal year's operation and the result has been that during the past year, our task has not been so hard and the great mass of detail complications of the initial year's application of the new order of business has been swept aside, owing to the fact that the vast majority of property owners have become accustomed to the provisions as outlined by the ordinance prescribing the manner and method for conducing the business of this utility.

Therefore, in outlining a resume of the business of the past fiscal year, I will endeavor to give in comprehensive detail the principal accomplishments of the division directly under the supervision of your Chief Clerk.

In doing so I will take up the different functions and activities in a systematic manner, with commentations upon each of same. Paramount to all details of the various activities, however, is the fundamental principles which form the basic elements upon which our institution is founded. Therefore, the first subject considered will be the amended "Rules and Regulations for the Conduct of the Bureau of Water Works."

AMENDMENTS IN RULES AND REGULATIONS

At the beginning of the year, a few important changes were made in the ordinances defining the procedure for conducting the affairs of this utility, which changes have not only facilitated the transaction of business detail, but have been of great aid in properly standardizing certain features relative to the use of water and the manner of obtaining same. The important changes were as follows:

(a) Reduction of time allowance for obtaining credits for vacancy.

(b) Providing method for sale of water at meter rates for building purposes.

(c) Prohibit all physical connections between private water systems and the system maintained by the City.

These changes and amendments have all been beneficial to the City in particular and to the rate-paying public in general. The first change is of a special benefit to the consumer, inasmuch as it reduces the time for which premises must be vacant to secure a "vacancy credit" from 30 to 20 days, and whereas under the former regulations no service was furnished for less than one month's rate, service is now given on the payment of rate for a period of twenty days.

As to the second important amendment, the intention was to allow water to be supplied at meter rates for building purposes, if a meter was requested, not only as the basis for the collection of water for building purposes, but as a future basis for the collection of permanent

rates for the service of water. The language of the amendment was not perfectly clear, but a change has been recommended for the present year which will clarify the original intention. The ambiguity of the existing section has caused some confusion and trouble, but in such cases a satisfactory explanation has usually been accepted by the complaining parties.

The third important change was, perhaps, the most important of all the amendments, touching, as it does, on the public health and safety of the people of this city. Though we have had no trouble caused by a possible contamination of the City's water supply by that of some of the many private systems that have had physical connections in existence between such systems and that belonging to the City, it still remains, however, that though every possible precaution be taken, such as installing double gates with a pet cock between them for draining the service connections or by the installation of check valves, the danger is still in existence as long as the physical connection is allowed to be maintained.

It was then deemed wise to remove every possible vestige of pollution or contamination and minimize the danger of such by prohibiting the maintenance of all such physical connections. Therefore, in conformity with these requirements, a systematic plan of forcing the discontinuance of these physical connections was instituted, and as to the particular results attained along this line I will touch upon later in this report.

Later in the year it became apparent that it was in the interest of efficiency and protection to the water system of the City that the rules ordinances be further amended by repealing those sections relating to the installation of service pipes from the main to the curb lines by plumbers and others, and requiring that in the future such work be performed by employes of this bureau.

Accordingly, Ordinance No. 31656, which authorized service installations to be made by the Bureau of Water Works, was passed by the Council on April 26, 1916, and became effective 30 days later. While this ordinance has only been in operatoin a few months, it is rapidly becoming apparent that if such a measure had been in existence several years ago, the entire system would be in a much better condition of maintenance. However, this phase of the work will likely be dwelt upon more fully by General Foreman Gray in his report, as it is directly under his supervision.

As to whether or not the rates charged for installation of services is fair and equitable to all concerned, I am of the opinion that the present rates have not been sufficiently tried out to establish a permanent basis for this work. Probably at the close of another year we will be in a better position to determine the permanency of these rates.

One other change that was found to be desirable, but was made in the nature of an experiment, was that of allowing premises having metered services to use water through hose for any purpose, at any hour of the day. Though there were some objections on the part of the flat-rate consumers, no complaint of any seriousness was registered, and as far as we are able to determine this measure was successful.

On account of the short summer season just passed, it is impossible at this time to state just what the results would be from the viewpoint of this division as to feasibility of a permanent continuance of this policy.

RECORDS OF BUSINESS TRANSACTIONS

During the past year no changes of any importance were made in the method of transacting or recording the various details of this activity, the many problems arising through the introduction of the present system having been solved during the first year's experience of the principles involved. Some changes of a minor nature were instituted, but, as above stated, the business of this branch of your bureau was in such efficient working order that no important changes were necessary.

In my last annual report, I made reference to the devising of a new ledger form and the economy with which the work was carried forward in transferring the historical information to the new ledgers. Permit me to say now that these ledger forms are the best that have yet been devised. The ease and rapidity with which the clerks are able to give information on any account and the general accuracy and efficacy maintained in the handling of the various accounts lead me to believe that our method of accounting has reached the highest point of efficiency in the history of this institution. Allow me to make mention in this connection that during the year past, we were visited by representatives from some of the Water Departments of various Eastern and Coast cities and our methods of handling consumer's accounts was in every instance given most favorable criticism. Ordinarily such comment would be worthy of only passing consideration but coming from men of experience in these cities, leads us to believe that we have built up a system in which we take no little pride.

NUMBER OF EMPLOYEES

The same force of clerks are employed in this division as in the previous year, though a total of 1,632 accounts were added to the various ledgers when we obtained control of the St. Johns Water Works & Lighting Company's system. The flexibility of our system permitted these accounts to be so divided that it was found not necessary to provide additional office help.

ST. JOHNS SYSTEM

On April 1, 1916, the plant above mentioned was taken over by the City of Portland, the property and books of the company being transferred to this Bureau. It became necessary at this time to provide an additional inspector to take care of the field work. This was the only additional item added to our "Personal Service Account."

The condition of the books of the old company were found to be in much better shape than were those of the Town of Linnton, which was obtained by annexation the year previous. According to the contract entered into by the St. Johns Water Works & Lighting Company and the City of Portland, we were to make an effort to collect delinquencies for them. Considerable difficulty was experienced in this matter, owing to the fact that their statement of delinquency covered a period of several years' standing. It was our understanding that our efforts were to be confined only to current delinquencies and it was upon this basis that we attempted such collections. The sum of $86.35 was collected and sent to the City Treasurer and on proper claim being made was then turned over to Mr. P. H. Edlefson, as the representative of the company. There is still collected the amount of $13.10, which remains in the hands of the City Treasurer.

The work of preparing ledger accounts, addressograph plates, etc., was commenced immediately upon assuming control of the plant and

by July 1, the date the first bills were issued for this section of the city, found us ready for accepting of consumers' rates from the people residing therein.

Out of the total of 1,632 service accounts taken over (which was later reduced to 1,599 by reason of charging carriers to services from which water was actually carried), it was found on checking the accounts that there were 323 vacancies, amounting to approximately 20 per cent of the total, which is a very much larger percentage on vacancies than was in existence throughout our system.

It was also found that the best interests of the consumers in that portion of the city would be served by establishing a pay station for their convenience. A contract was entered into with the Currin Brothers Drug Company in accordance therewith. That this station has proven popular with the rate-paying public in that community is attested by the fact that of the total collections from St. Johns, 65 per cent of same has been made by this station.

I now desire to state briefly the business that was actually transacted by the various pay stations.

PAY STATIONS AND BRANCH OFFICES

The following statement shows the number and amounts of bills collected by the various stations:

	No. of Bills	Amounting to—
No. 1—East Portland Branch, 123 East 7th Street	16,672	$ 40,468.55
No. 2—Albina Branch, 296 Russell Street	20,564	44,272.45
No. 3—Piedmont Pharmacy, 1150 Union Ave. N.	4,018	8,812.15
No. 4—University Park Drug Co., 684 Lombard Street	2,265	4,534.70
No. 5—The Drug Shop, 2003 E. Glisan Street	2,650	5,785.15
No. 6—Mt. Scott Drug Co., 92nd Street and Foster Road	3,113	6,497.20
No. 7—Schultz Pharmacy, 1621 E. 13th Street	3,602	7945.25
No. 8—"Currins for Drugs," 105 Philadelphia Street	1,923	4798.85
Total number of bills collected	54,807	$ 123,114.30

A comparison of this statement with that of last year shows that there has been a decrease of 2,041 in the number of bills paid to the two Branch Offices, while there has been an increase of 597 in the number of bills collected by the stations under contract. I would conclude from this that there is a tendency on the part of the rate-paying public to either transact their business directly with the main office or by patronizing the station nearest to their particular premises.

The expense for collections at the various stations under contract has been but $383.73 (being one per cent on collections amounting to $38,373.30), the slight increase of the previous year being due principally to the commission accruing to the new station at St. Johns.

The maintenance of these stations have, at a small expense to the city, been beneficial to the suburban consumers and I believe we are entirely warranted in continuing this practice.

A slight departure from our established rules was made during the past year, inasmuch as the two Branch Offices only were permitted to make adjustments, but so few have actually been made by these offices that no trouble has been experienced.

REFUNDS OF METER DEPOSITS

This item has not been a very large factor during the past year

for the reason that the principal portion of this business was transacted in the fiscal year ending November 30, 1915.

The original estimate of this account was $35,000.00, but to date, only $16,861.25 has actually been returned to those having made such payments. Out of this amount, only $1,183.50 was refunded during the time covered by this report. It is reasonably certain that not more than 60 per cent of the entire original estimate will ever be refunded, as a great many of the remaining deposits were made in years past, and those paying same are now either deceased or have removed from the city. Each day brings in a few claimants for these refunds, but in the majority of the present cases, receipts have been lost and it, therefore, becomes necessary to secure affidavits covering these losses. There is no expense to the consumer in such cases, as Mr. German was constituted a Notary Public to facilitate these transactions.

DELIVERY OF BILLS

The expense for delivering bills was necessarily increased during the past year, due to two principal reasons. First, the addition of the accounts formerly supplied by the St. Johns Water Works & Lighting Company made it necessary to provide additional postage as the principal portion of this district is scattering and it is not economy to attempt delivery by inspectors. Secondly, there has been a general increase in the number of bills sent to other addresses than for those for which the bills are rendered, which is occasioned by the fact that a great many owners, rental agencies, etc., are taking care of the water accounts of their various properties and bills of this nature must of necessity and economy be mailed.

The number of bills so delivered now amounts to over 12,000 per quarter out of a total of approximately 57,000 regular quarterly and monthly bills.

The total expense for postage during the past year, including the cost of envelopes, was $1,493.80, as compared to $1,394.00 for the year previous, an increase of seven (7%) per cent.

LAWN SPRINKLING

This is one of our most vexatious problems and causes more than the average amount of confusion. A new rate was provided in the annual sprinkling rates for 1916, that of making a charge for "one-half lot of ground or less," also one change was made in the existing rates, namely, a reduction from $5.00 to $4.50 in the rate for 1½ lots, which was only fair and equitable for premises of these dimensions.

Our principal difficulty with the lawn sprinkling problem was that of dealing with those premises the owners or occupants of which claimed that water through hose was only used once or twice during the season. Some of these cases were very aggravating, as the users thereof in most cases thought that their needs would be satisfied by "taking a chance" and risk being caught by the inspector, while in a good many cases, water through hose was used intermittently, through ignorance of the provisions of the ordinance prescribing the rates and manner for using water for this purpose.

A thorough system of inspection and patrol was maintained throughout the season and it is reasonable to believe that the percentage of unlawful users was very small during the past year. We were greatly handicapped on account of climatic conditions and we are therefore

unable to show the increase that ordinarily ought to be shown in the number of sprinkling applications.

During the fiscal year of 1915, there were filed 18,021 such applications, while during the year just closed, there were but 16,674, a loss of 1,347, which loss is not only attributable to the climatic conditions above referred to, but a large part of such decrease is due to meters having been installed on hundreds of services in the interim between the close of the 1915 season and commencement of the 1916 season and if the present year should show sprinkling services proportionately metered, I doubt very much if this item will show any increase of importance during the coming season.

WATER FOR BUILDING PURPOSES

This item has not required the attention this year that it formerly did. As stated in my report for 1915, this particular activity is almost exclusively conducted by the Bureau of Buildings in the Department of Public Works.

At the beginning of the year, there was no improvement in the way that this business was conducted by the Bureau of Buildings, upon which I commented very frankly a year ago, but when one or two instances of gross carelessness were brought to my attention, I immediately asked for a conference with those in charge of this work in the Bureau of Buildings. After much deliberation, instructions were issued by those in authority that more care and diligence must be used by employees in computing estimates of water used for building purposes, and since that time better results have been shown. I am still of the opinion, however, that this work belongs properly to this office, having to do, as it does, with matters entirely within the sphere of the activities controlled by the Bureau of Water Works.

DECORUM AND DISCIPLINE

Proper discipline in an office employing the number of men that we do is a matter of great concern to all. I am pleased to report that the interest displayed by the employees of this division in their respective duties is such that it is seldom necessary to use strict or harsh measures of a disciplinary nature. The decorum of the office, considering the number of employees, has at all times been of a first class order. Though some reprimands have been given for carelessness, there has only been occasion to recommend demerits in two or three instances and in perceptible contrast to the previous year, no suspensions or discharges were found necessary.

VACATION

This matter was again held to a minimum expense, the schedule of vacations being arranged so that with the temporary aid of only two clerks and two inspectors, an organization of 23 clerks and 23 inspectors was enabled to avail themselves of the vacation privilege during the season when the climatic conditions were agreeable.

The cost of vacations consumed but 48.3 per cent of the appropriation for clerical help, or $434.90, and 76½ per cent of the vacation service allowed for inspectors, or an amount of $688.70. We were extremely fortunate in obtaining the services of one clerk and two inspectors for the vacation work, who were experienced in the details of their duties, having on former occasions been in the employ of this Bureau.

METERS

This is a subject that is one of the most important coming under our observation. During the year 1915, a system was put into operation of receiving applications from consumers desiring meter service and filing same in sequenee, such applications being considered in their respective order of precedence. At first these were accepted from owners, lessees, or agents of premises, but later in the year it was found advisable to restrict such applications to owners exclusively.

A total of 1,984 meter applications were filed during the fiscal year 1916, and of this number, 526, or 26½ per cent (together with those that were carried forward from the previous year), were accommodated. There are now on hand meter applications to the number of 1,458 and for the reason that the Council decided not to purchase a further supply, it has been impossible to comply with the requests of any of the remaining applicants.

In several instances, we have found it necessary to make tests of meters at the premises in order to satisfy consumers of the accuracy of the meter registration; in every case the result has been that these meters have either shown to be registering correctly or a slight error has been found favorable to the consumer. But three tests have been made during the past year involving the payment of a fee in accordance with Section 34 of the Rules and Regulations.

In conformity with the practice of charging a fee for testing private meters for use on services, outside the City Boundaries, a total of 89 such tests were made and fees collected to the amount of $56.25. These tests were made on meters of various sizes and style, varying from the ⅝-inch style to the 6-inch compound and 6-inch Protectus meters, and in practically every case the test proved satisfactory to all concerned.

Another innovation instituted for the betterment of the service was that of requiring all old style meters and elevator indicators, where found not properly registering, to be replaced by compound meters of proper sizes and in each instance, the registration of the newly installed meter has been found to be from 5 to 40 per cent higher than was the registration of the defective instruments. This sustains our position and contentions that the meters first mentioned above were not properly recording all water passing through the service pipes in question.

PHYSICAL CONNECTIONS WITH PRIVATE SYSTEMS

As mentioned in the first part of this report, these connections were ordered removed wherever found. There have been 44 connections of this nature brought to light since the adoption of this policy and, with the exception of three cases, all have either made their disconnections or are in the process of doing so. Only one case exists, that of the Meier & Frank Company, where an absolute refusal has been made to comply with our requirements.

One case was made the subject of litigation, that of the West Oregon Lumber Company at Linnton, Oregon, who not only sought a permanent injunction restraining the city from compelling a physical disconnection of their private system from that maintained by the City, but also sought an injunction to restrain the City from requiring large meters to be intsalled on fire protection lines. As you are already aware, the Court sustained the City in both instances and dismissed the temporary injunction. After the decision of the Court had been rendered an active campaign was commenced to compel all other sim-

ilar connections to be removed without delay and with the results above described.

Several cases were also brought to light of the unlawful use of water through fire lines for commercial purposes. While it has always been thought that such unlawful use was being made in a number of instances, the past year produced concrete evidence of this fact, and meters were immediately ordered to be installed. That the City has lost thousands of dollars in revenue from these unlawful uses was made evident, especially in two or three cases where the first bills, after meters had been in service, amounted to several hundred dollars, and thereafter, through a practice of economy, these same consumers materially reduced their regular monthly bills.

If this Bureau is upheld in the future in matters similarly existing, the next year's business should show that this policy, though apparently exacting and severe, is conducive to the efficiency of the Bureau and is productive of better control in the matter of a proper distribution of the water supply of the City.

ACTIVITY REPORTS

Two years ago, I established the practice of requiring each activity head to make record of all transactions coming under their surveillance and report to me monthly on same. This has been of material value to us, as it gives an insight at all times into the details of our daily work.

The information arising therefrom is also valuable for statistical purposes, as we are frequently requested to furnish information along these lines, which would be a very laborious task if the data were not already in a tangible form.

The activities of each month of the fiscal year is reported to you in a regular monthly report, but in order to make this a complete report, I am stating below the total of these various reports for the entire year. The several activity reports will be taken up in the order of their importance.

(a) HEAD LEDGER CLERK

	Number of Bills	Amounts
Flat Rate Bills issued	151,680	$334,375.80
Meter Bills issued	68,114	401,837.20
Mid-Term Bills issued	3,847	13,834.70
Tapping Bills issued	232	2,928.00
Service installations	247	5,707.20
Turning On Bills issued	3,531	3,769.00
Building Purpose Bills issued	1,544	6,471.85
Miscellaneous Bills issued	163	3,004.70
Grand total Bills issued	229,358	$771,928.45

Bills for tapping were discontinued on May 26, 1916, as this charge was eliminated by the provisions of Ordinance No. 31656, which provides that the work of laying all services, as well as tapping, should be done by employes of this Bureau.

The bills issued as per the above statement disclose that the average flat rate bill per active service is $8.81 7-10, while the average annual meter bill per active service was $23.59 8-10.

Mr. German has continued in active charge of this important branch and his services as an accountant have been of great value to

the City, as he is able to comprehend at a moment's notice, just what is needed in any particular feature of the accounting system in order to perfect the plan desired. Not only has he proven capable in mastering the duties of his position, but has been of great assistance in aiding your Chief Clerk in the disposal of complaints.

(b) CASHIER

Cash receipts for fiscal year	$746,116.45
Outstanding balance at close of business November 30, 1916	19,818.60
Amount of meter deposits refunded	1,183.50
Amount refunded from accrued revenue	2,203.40
Total refunds	$ 3,386.90

The figures represented in the "Amount Refunded From Accrued Revenues," on the face of same have the appearance of being exceptionally excessive, but in these refunds are included the bill of Multnomah County for water used at the Pesthouse, amounting to $215.80, and the overcharge of the Morris Packing Company, amounting to $168.20, the data pertaining to same being on file in our correspondence records.

Another reason for this seemingly excessive account is due to the fact that when large connections are made to the distribution system, a deposit to cover the expense thereof is exacted. We intend to make such deposit large enough to cover these expenses and refund the overcharge after completion of the work and it is refunds of this nature that causes our refund account to appear exorbitant.

The duties of the Cashier and his assistant remain practically the same as during the previous year, for what they do not directly receive from the consumers, is received through the various pay stations and must in the end be checked through the Cashier before credit can be passed to the consumer's account.

(c) CHIEF INSPECTOR

No. of turn ons made for new tenants, removals, etc	27,363
No. of shut offs made on account of vacancies, etc	45,311
Average number of shut offs on account of vacancies per quarter	11,328
Estimated number of bills delivered by inspectors	119,159
Number of regular inspectors on duty	22
Inspectors on duty account vacancy service	2
Amount collected by inspectors for building purposes	$2,925.20
Reprimands given inspectors	8

The efficiency of this branch of the service, though not perfect, by any means, is in a much better state than it has previously been, due principally to the fact that their work is subject to surveillance, which did not exist during the major portion of time that the water system has been under the control of the City. Mr. McPherson, Chief Inspector, together with the undersigned, has instituted many reforms which have brought very noticeable results during the past two years.

In order that he can properly oversee the work of the various inspectors and to the end that better results may be obtained, I would respectfully recommend at this time that he be provided at some time in the near future with a small runabout automobile to aid him in covering the city.

A machine of this kind would also greatly aid us during the sprinkling season in patrolling the city, as well as being of material help in cases requiring immediate action.

Emergency orders for turning on or shutting off services or for rate inspection are becoming an almost daily occurrence and a convenience of the type above mentioned would facilitate the carrying out of such orders.

Another recommendation I desire to make is that at sometime in the near future, we may be able to provide suitable quarters in the City Hall sufficiently large to accommodate the entire personnel of the inspection division, thus requiring every employee to report for duty at the main office. Control of these employees would thus be greatly facilitated.

(d) DELINQUENT CLERK

Total number of delinquencies, all districts	81,028
Average number of delinquencies per quarter	20,257
Number of shut offs for non-payment	3,645
Average number of shut offs monthly for non-payment	304
Average delinquencies carried forward to following month	874

This feature of the work is probably the object of the most severe criticism to which we are subjected. Probably 50 per cent of all delinquencies are the result of oversight or forgetfulness on the part of consumers, while the balance comprises those who are habitually late, and it is these who are the first to complain or censure. I am pleased to report, however, that there has been a very perceptible decrease of the number of consumers coming under this head and if financial conditions show any improvement during the coming year the above statement should show a material decrease during this time.

The revenue for turning on fees during the past year amounted to $3,706.00, an increase over the preceding year of $809.50. While this seems indicative of an extraordinary increase in the number shut off for non-payment, the increase is mainly due to the policy of requiring penalties of this nature, whenever a service was discontinued for vacancy wherever found and for which no order had been received to discontinue same. This policy was inaugurated about the middle of the fiscal year 1915, which partially accounts for the increase in turning on penalties during the past year.

We found it necessary in thirteen cases to shut the water off at the main, thereby making such places subject to a further penalty of $5.00 before service could again be established.

(e) INFORMATION CLERK

Number of duplicate bills rendered	27,315
Number of complaints received	900
Number of requests for adjustment	3,918
Number of adjustments allowed	2,237
Number of orders filed for turning on	13,760
Number of orders filed for shutting off	13,983
Number of refunds of accrued revenue	460
Number of deposits refunded	343
Number of checks handled through mail	3,616

You will note from the above that while the amount of business transacted through the "Information" windows shows an increase over the previous year, the number of complaints from all sources has shown a marked decrease of more than 55 per cent. The number of adjustments shows a relative decrease of 37 per cent. The principal adjustments are necessitated on account of vacancy credits being allowed for partial occupancy of two or more families, stock, etc., and errors in meter readings. This activity shows a healthier condition than at any previous time.

(f) PERMIT CLERK

Number of permits issued for new services	849
Number of permits issued for renewal of services	304
Changes of services	108
Curb services	100
Permits for additional fixtures	1,744
Fixtures removed	236
Miscellaneous	20
Total number of permits issued	3,361
Number of taps, and services installed (corporation cocks)	515
Number of taps and service installations (sleeve and valve)	49
Total number of taps and service installations	564
Number of plumbers filing bonds	149

This activity shows a decided decrease from that of the previous year, due to the same cause that existed a year ago, namely, practically no construction. A depression in general business conditions always brings a like depression in the extension of water services.

The ordinance providing that the installation of all services to curb lines shall be done by our employees, which went into effect on May 26, 1916, has, as above mentioned, been very satisfactory. Since the time that it went into operation, 247 services have been installed at a cost to the Bureau of $5,332.56, while the amount received for such work has been $5,712.40, which receipts includes the sum of $384.51 paid by other departments of the municipal service for work done by this Bureau to supply their needs. A small profit is, therefore, shown of $379.84, or an average profit per service of $1.53 8-10.

For a violation of the ordinance relating to the connection of fixtures, etc., to the water system, we have caused the arrest of two plumbers and have on each occasion secured a conviction, but I am sorry to say that in each case, the Court, after conviction, paroled the offenders on condition that they call at this office and rectify their errors. I trust that during the coming year, whenever arrests are found necessary and convictions secured, that we will be more fortunate in having the judgment imposed by the Court carried out, as it is demoralizing to our entire system, as these ordinances are not taken seriously by other plumbers making like connections. Proper enforcement of this ordinance is our safest and only method of maintaining absolute control over the water system.

(g) METER CLERK

Number of new meters installed by city (domestic use)	1,293
Number of new meters installed by city (commercial use)	398
Number of private meters installed (domestic use)	56
Number of private meters installed (commercial use)	55
Number of meters in service, secured from St. Johns (including 3 private)	138
Total number of meters installed for year	1,940
Number of meters changed	896
Number of meters removed from service	449
Average cost per installation	$2.84
Average cost per change	.61½
Average cost per removal	.54
Total number of meters now in actual service	16,986
Net gain for past year	1,491

These statistics are furnished through the courtesy of Mr. Rufner of the general office and gives in detail, in so far as this division is concerned, the condition and amount of work done towards metering

services required so to be by ordinance, together with those installed on application.

(h) TELEPHONE OPERATOR

No. of calls over Pacific phone, Main 20 (removed March 8, 1916)	969
No. of calls over Pacific phone (2 lines), Marshall 4100	19,622
No. of calls over Home phone	2,456
Total number of calls for year	23,047

These calls were not divided this year as to their specific nature for the reason that it was almost impossible for a man of Mr. Kirkland's age to determine and record accurately what was desired, whether information, adjustment or complaint.

On account of the multiplicity of phones in this office, it frequently occurred that two or more would ring at the same time, and with other employees answering same it was difficult to attempt any accuracy of the nature of calls received. The practice was therefore, discontinued.

The above tabulation does not include calls over the private lines between this office and our two branches, nor does it include statistics relating to the phones located on the Chief Clerk's desk.

(i) MACHINE OPERATOR

No. of new plates made, per addressing machine	3,975
No. of changes in addresses or names	11,737
No. of changes in rates	6,933
No. of plates discarded	2,736
No. of bills mailed	92,248

Though of minor importance, proper changes in addresses are of vital interest in the proper conduct of our business for, by means of a systematic checking and recording of all orders of this nature, we are enabled on many occasions to settle disputes and complaints. The maintenance of our mailing equipment in proper order is as fully to be desired as any other one feature of our activities. Incidentally, I might mention that the Manufacturer's Agent in Portland for the distribution of this equipment, has at various times made very flattering comment on the condition and order of our mechanical appliances.

(j) SERVICE INSPECTION

Perhaps one of the most important, if not the most important, of our activities has been that of "Service Inspection." Commencing with January 2, 1915, this work has been constantly under way since that date and up to the time of making this report, the City has been approximately two-thirds covered and it will still require another year to bring this activity to a close.

The general plan for conducting this work was outlined in my last annual report and it only requires in this report that some comment be made as to the result obtained.

On the face of the statistics outlined below, it can readily be seen that this campaign has been self-supporting, the item of "Back Bills Rendered" alone having produced sufficient revenue to date to carry on the expense of the entire undertaking, while the permanent increase in monthly rates will be of lasting pecuniary benefit to the City.

Not alone from the standpoint of revenue has this work been productive of results, but many irregularities in existence pertaining to

the system have been rectified and the control over the entire system has been greatly strengthened. Wasteful conditions, defective fixtures and unlawful uses were detected in every section of the city and immediate action taken to remedy such faulty conditions. It is a safe statement to assert that this is one of the best investments that has been made by his Bureau in the history of its existence.

I herewith present the entire results obtained and the status of the work at the close of business November 30, 1916:

NUMBER OF INSPECTIONS

Fiscal year 1915	20,078
December, 1915	2,064
January, 1916	1,083
February	816
March	2,223
April	1,980
May	2,040
June	1,824
July	1,778
August	845
September	1,737
October	2,037
November	2,050
Total	40,555

MONTHLY EFFECT ON REVENUE

Month	Rates	Increased	Rates	Decreased	Net Monthly Increase
Fiscal year, 1915	1,496	$696.15	185	$ 50.00	$ 646.15
December, 1915	186	94.20	18	7.20	87.00
January, 1916	98	36.20	10	1.70	34.50
February	65	30.60	4	1.35	29.25
March	122	47.85	16	2.25	45.60
April	138	48.20	11	1.90	46.30
May	135	55.45	5	1.50	53.95
June	141	52.75	21	7.10	45.65
July	119	43.20	10	3.10	40.10
August	37	11.80	7	3.30	8.50
September	100	34.90	7	1.85	33.05
October	147	72.35	9	1.85	70.50
November	164	61.65	9	3.55	58.10
Total	2,948	$ 1,285.30	312	$ 86.65	$ 1,198.65

SERVICES AND FIXTURES NOT ON RECORD

	Services	Fixtures
Fiscal year 1915	57	732
December, 1915	5	129
January, 1916	3	80
February	6	100
March	9	242
April	3	163
May	5	258
June	3	225
July	3	244
August	1	98
September	4	124
October	2	236
November	9	241
Total	110	2,872

BACK BILLS RENDERED

Month	Bills Rendered	Cash Paid	Adjustments	Balance
Fiscal year 1915	$ 7,582.45	$ 5,973.50	$ 1,526.15	$ 82.80
December, 1915	2,212.05	1,877.05	332.50	2.50
January, 1916	249.65	173.45	70.20	6.00
February	148.85	144.00	4.85	.....
March	273.90	222.80	44.10	7.00
April	189.95	179.60	10.20	.15
May	229.70	210.60	14.40	4.70
June	225.55	203.85	13.00	8.70
July	162.00	123.00	23.05	15.95
August	116.70	111.40	.....	5.30
September	295.65	269.60	20.55	5.50
October	514.55	198.75	183.90	131.90
November	668.70	237.90	19.25	411.55
Total	$ 12,869.70	$9,925.50	$2,262.15	$ 682.05

Of the above balance due, there has been thirteen services with bills accrued to the amount of $98.90 that have been shut off. You will note that of the total amount of $12,869.70 billed, there is only $662.05, constituting 5 1-3 per cent of the original billing, that is not yet liquidated, while approximately $500.00 of the balance due will undoubtedly show a liquidation in the course of a few days. The greater part of the unpaid balances are outstanding on vacant premises, while during the month of November there were three items alone which constitute $368.80 of the total balance yet unpaid.

LEAKING FIXTURES

	Water Closets	Other Fixtures
Fiscal year 1915	1,194	149
December, 1915	100	13
January, 1916	62	2
February	28	10
March	143	22
April	114	25
May	141	27
June	139	26
July	132	13
August	48	3
September	54	14
October	61	12
November	114	19
Total	2,330	335

With reference to the above information pertaining to leaking fixtures, I desire to call your particular attention to the results obtained through the systematic inspection of leaking fixtures and services. Services found having leaks either in the service connections or in some fixture attached thereto are immediately notified by card notice to repair same without delay, these notices being followed at intervals of 30 days by the service inspector, who again visits the several premises and where he finds such fixtures are still in a defective condition, the service is shut off. During the time for which the service inspection has been under way, 170 services were shut off, the defective fixture in each case still being in a faulty condition. The only services that have not again been turned on by our employes are those that

have become vacant, and but 33 of the original list of shut off services are still shut off or not repaired.

Premises found having water coolers	362
Refrigerating plants not listed and not metered	3
Meters installed as result of inspection	594
Water closets and urinals found which were not provided with tanks or self-acting float valves	173

The last five items are not given in monthly form in this report, inasmuch as the regular monthly reports on file in the General Office bears this information in detail.

KINGS HEIGHTS INTEREST ACCOUNT

I desire to make a concise statement at this time pertaining to a matter which has been a troublesome problem.

As you are aware, this company defaulted in their regular payments to the "Water Bond Interest Fund" and the Bonding Company then carried out the provisions of the original contract to the amount of their bonded liability, or $2,000.00, since which time no payments have been made upon this account.

By direction of the Commissioner of Public Utilities, no further billing was made in this account, but same was withheld until the close of the year, when the accumulated total due us of $977.20 was sent to the Commissioner's Office and it is my understanding that the City Attorney is to be directed to file suit against the defaulting parties to determine the status of this contract.

DISTRIBUTION SYSTEM DATA

About December 1, 1915, Engineer Clarke requested a comprehensive statement of data relating to the number of services, both metered and flat rate, together with the monthly consumption as shown by meter readings, such information to be segregated with respect to the various distribution systems and pressure areas.

Two clerks were employed to tabulate this data, which was done in two months' time and at a cost to the Bureau of approximately $300.00.

The summarized information on completion was transmitted to the Chief Engineer for his records and a copy of same filed in the General Office for future information.

STREET NUMBERS FOR SOUTHEAST SECTION

Mention was made in my annual report for 1915 of using one of our inspectors for the purpose of assigning proper house numbers to all residences and buildings in this section of the city, within the City boundaries, such numbers to be of a temporary character and to be placed in chalk upon the fence or doorstep of the various properties. This was to be followed by card notices requiring consumers to provide permanent numbers, on pain of a discontinuance of their water supply.

I am able to report at this time that no confusion resulted from this move and that with possibly a few exceptions, proper numbering has been accomplished. Automatically, this move dispenses with the trouble experienced in the past caused by identification of service connections by lot, block and addition designation.

There now remain only premises lying outside of the City Boundaries that must be indexed in this manner.

CLASSIFICATION AND NUMBER OF SERVICE CONNECTIONS

The annual count of active and vacant service connections has been completed for the fiscal year 1916, and I herewith submit the tabulation deduced therefrom:

Classification	Active Services	Vacancies
Dwelling, including flat	45,394	7,479
Dwelling and store, combined	318	56
Apartment houses	432	6
Hotels, lodging and rooming houses	650	46
Stores, restaurants, etc	1,916	649
Churches	161	8
Schools, public and private	189	.....
Office buildings and banks	181	10
Manufactories	229	26
Laundries	91	4
Fire protection lines	511	16
Elevators	170	40
Miscellaneous	2,351	518
Total	52,593	8,858

Total number of services connected to the City's system 61,451
Total number of meters now in service 16,986

of which 12,295 are installed on services supplying residences and 4,691 are on commercial services, showing that of all service connections attached to the system, 27 2-3 per cent are metered. Of the total number of metered services, 1,157 are temporarily vacant.

An increase of 926 services, exclusive of St. Johns, is shown over the preceding year's count, a gain of only 1 2-3 per cent, which is far below the average gain for a year, due to the expansion of the water system. This increase comprises 849 new service connections and 77 services discovered by service inspectors.

The number of active services for the year, exclusive of St. Johns, shows a decrease of 47, while the vacancies show a corresponding increase after taking into consideration the addition of the number of new services installed, which shows a total increase in vacancies, exclusive of St. Johns, of 973, and of which 836 are dwellings.

The statement of vacancies discloses that of the total service connections in use, 14.4 per cent are vacant or discontinued.

I am giving below comparative data relevant to the number of existing connections to the system (which, prior to 1914, was recorded as places supplied), together with the vacancies during the same period.

Comparative statement of places connected to system and vacancies existing:

Year	No. of Connections	Gain Over Previous Year	Percentage	Vacancies	Percentage of Total Services
1890	5,765				
1891	6,356	691	10.8		
1892	7,010	654	9.3		
1893	8,045	1,035	12.8		
1894	8,104	59	.7		
1895	8,469	365	4.3		
1896	8,665	196	2.3		
1897	10,144	1,479	14.6	2,000	20.0
1898	10,995	851	7.7	1,380	12.6
1899	11,477	482	4.4		
1900 (No count)					
1901	12,930	1,453	11.2	998	7.7
1902 (No count)					
1903	20,473	6,543	32.		
1904	22,282	1,809	8.1	1,533	6.8
1905	24,307	2,025	8.3	1,675	6.9
1906	26,483	2,176	8.2	1,657	6.1
1907	31,911	5,428	17.0	1,945	6.1
1908	35,840	3,929	10.6	2,698	7.5
1909	39,888	4,048	10.1	2,768	6.9
1910	44,180	4,292	9.7	2,873	6.5
1911	52,865	8,685	10.7	4,056	7.6
1912	59,711	6,846	11.4	5,230	8.7
1913	62,575	2,864	4.5	6,673	10.6
1914*	57,277	-5,928	8.6	6,861	11.9
1915	58,926	1,649	2.8	7,690	13.
1916	61,451	2,525	4.1	8,858	14.4

*System changed to "number of service connections" instead of "places supplied."

You will note from the above statement that the percentages of "Gain in Services," during the years 1893, 1897, 1903, 1907 and 1912 were exceptionally high. This is due to the purchase or acquisition of other private systems, which, therefore, would increase the gain to abnormal proportions in determining the actual gain due to the growth of the city.

The statistics relating to fire protection pipes are subdivided as follows, with particular reference to the number and size of such connections, together with the approximate annual revenue derived from same:

Size	No. Hose	No. Sprinklers	Approximate Annual Revenue
2" and less	100	1	$ 606.00
3"	114	3	1,053.00
4"	120	30	1,800.00
5"	4	2	90.00
6"	67	36	1,745.00
8"	7	7	420.00
10"	1		60.00
Total	413	79	$5,774.00

In addition to the above, which includes fire lines temporarily shut off, there are twenty-two two-inch, three three-inch, six four-inch and four six-inch lines which are metered, but cannot be classed as fire

lines exclusively for the reason that water for other purposes passes through the same service and meter.

CONDITION OF REVENUE ACCOUNTS

The following statement shows in totals the condition of the different revenue accounts at the close of the year, but in the items of gross receipts and adjustments, must be taken into consideration payments and adjustments of bills charged in our 1915 accounts, but liquidated during the past year.

Kind of Revenue	Bills Issued	Cash Receipts	Adjustments
Flat rate	$344,496.05	$340,363.05	$ 3,719.30
Meter rate	405,551.65	403,203.00	1,403.25
Tapping and service installation	8,635.20	8,538.05	.....
Turning on	3,769.00	3,706.00	29.00
Building	6,471.85	6,168.15	250.00
Miscellaneous	3,004.70	2,138.20	.....
	$771,928.45	$764,116.45	$ 5,401.55
Outstanding balance, Nov. 30, 1915	17,408.15	.....	.....
	$789,336.60	$764,116.45	$ 5,401.55
Balance on November 30, 1916			$19,818.60

The adjustment in the "Building Account" of $250.00 is accounted for by reason of having erroneously made a charge off a certified check of $250.00 held in escrow, subject to full settlement of the contractor's account in the construction of the Public Auditorium. Ordinarily, no adjustments appear in this account, hence the above explanation.

The increase in the balance on the books at the close of business November 30, 1916, is $2,410.45, above that at the close of business November 30, 1915. The most of this is accounted for by reason of accruals on premises becoming vacant and bills not being paid until service is again desired. Actual delinquencies on current bills is practically the same as the previous year.

In this difference of outstanding balances, at the close of the fiscal years 1916 and 1915, respectively, are two items, those against the Town of Gresham for interest due the Water Bond Interest Fund for $750.00 and one against the Kings Heights Realty Syndicate of $111.20 for the same purpose; that, when deducted from the above difference, would only show an actual increase in this balance of $1,549.25. It is only logical, therefore, that the outstanding balance would show some increases comparable with the increase in the number of vacancies.

ANNUAL EARNINGS

This total will not coincide with the actual cash receipts for the year, due to the fact that with a system of billing "quarterly after service," it is not possible to include therein all that is earned, as all revenue due us for the fiscal year does not mature and accrue until various dates during the year following.

The following statement will show, as near as possible, the earnings from active services, service installation, building, tapping, turning on, etc.

Total billing for the year	$771,928.45
Deduct total adjustments prior to payment	5,401.55
Net revenue billed	$766,526.90
Less revenue earned prior to November 30, 1915	70,773.20
Net current year's revenue billed	$695,753.70
Add approximate earnings not yet accrued, but maturing in 1917	72,446.65
Total earnings for fiscal year, approximately	$768,200.35

In comparing this statement with the one rendered last year, I find that for some unaccountable reason, the item "Earnings in November, 1914, but billed in December, 1914," as shown in the last statement, was made to read $7,592.45 instead of $24,555.90. This would reduce the total earnings for the fiscal year ending November 30, 1915, to $770,605.85.

Deducting from the above statement $9,600.00, the approximate earnings of the St. Johns system for the past eight months, we find that the earnings of the system, not including St. Johns, are $758,600.35, or a loss of $12,005.50. This may be accounted for by reason of the 50 per cent reduction in fire protection rates December 1, 1915, loss of sprinkling revenues, both on flat rate and metered services, on account of climatic conditions, decrease of revenue for construction purposes and decrease in revenue from hotels, saloons and similar places going out of business January 1, 1916, by reason of the provisions of the state-wide prohibition law.

OPERATING COST OF COLLECTIONS AND INSPECTIONS

Cost of collections for 1915	$33,073.33
Cost of collections for 1916	32,277.82
Decrease	$ 795.51

Though our duties were increased during the year by the addition of 1,632 service accounts from the old St. Johns system, and though necessary to increase our postage expense considerably, we are able to show a small saving of more than 2½ per cent over the previous year, which is worthy of mention.

Cost of meter reading and inspection, 1916	$26,037.46
Cost of meter reading and inspection, 1915	25,648.79
Increase	$ 388.67

This statement shows a slight increase of the above amount, but when it is taken into consideration that with the addition of the St. Johns plant it required the employment of an additional inspector at an expense of $680.00 for the fractional proportion of the year that this plant was operated under the City's direction, it will be seen that a small saving of 1¼ per cent has also been made in this activity.

Of the entire earnings of the year of $768,200.35, the cost of collections has been but 4.2 per cent, while the cost of meter reading and inspection has been 3.3 per cent on the same basis, the total cost of operation of this division amounting to 7½ per cent of the total earnings.

Taking the amount of adjustments for the last year's operation under "The Monthly in Advance" billing system as a working basis

for comparative purposes and also taking the same year's expense accounts for collections, meter readings and inspection, an approximate saving to the City can be shown as follows, due to the change and methods in billing:

Total adjustments for two years under former system, approximately (computed on actual adjustments for 1914)	$ 57,116.24	
Actual adjustments 1915 and 1916	12,466.15	
Savings in adjustments formerly lost in vacancies		$ 44,650.09
Total expense for collections, meter readings and adjustments for two years under former billing system (computed on actual expense for 1914)	$168,295.38	
Actual expense for these activities, 1915 and 1916	117,001.40	
Net savings in expense account		51,293.98
Total saving due to present system of billing		$ 95,944.07

This total may vary a small amount from the actual savings, but it is indicative of what has really been accomplished by using the present billing system, which makes premises responsible for the payment of water rates.

CONCLUSION

The results attained, the work accomplished and the efficiency of our organization is in a great measure due to the loyal co-operation, not only of those employes under my immediate supervision but of my associates and superiors. To all those enumerated above, I hereby desire to extend my thanks and gratitude for the spirit manifested and the interest displayed at all times in our mutual relations and pleasant surroundings existing in the administration and performance of our several duties.

Particularly, do I again desire to show my appreciation of and extend grateful thanks for the aid given me by my assistant, Mr. German, in carrying out the established policies of the administration and in the supervision of the daily routine of business.

I can assure you, therefore, that with the present loyalty of employes in this division and with the same spirit of mutual co-operation in existence during the coming year, a more perfected and better controlled water system will be the inevitable result, redounding to your credit as the Chief Executive of the Bureau of Water Works.

Respectfully submitted,

V. G. CHESSMAN,
Chief Clerk.

ANNUAL FINANCIAL REPORT OF SUPERINTENDENT OF WATER BUREAU FOR FISCAL YEAR ENDING NOVEMBER 30, 1916

Portland, Oregon, December 15, 1916.

Honorable Will H. Daly, Commissioner of Public Utilities.

Dear Sir: I have the honor to submit the following information concerning the Bureau of Water Works for the fiscal year ending November 30, 1916:

Available Balance of Water Fund Nov. 30, 1915..	$.....	$ 109,910.32
Net Receipts for water sold.....	.....	762,200.45
Receipts collected for St. Johns Water Co. (to be refunded)	.....	13.10
Interest on Daily Balances.....	.....	4,078.36
$125,000.00 Water Bonds sold.....	.....	124,071.25
Sale of old water pipe, etc.....	.....	1,584.84
Water Main Fund transferred to Water Fund...	.....	4,989.68
Rent of Municipal Garage and other ground...	.....	725.00
Witness Fees	.....	7.00
Warrants cancelled as per Auditor's Report....	.....	38.19
Material drawn from stock in excess of this year's purchase	.....	1,789.16
		$1,009.407.35
Deduct Transfer from Water Bond Int. Fund....	2,800.00	
And Linnton Cash Balance.....	220.00	3,020.00
		$1,006,387.35
DISBURSEMENTS DURING FISCAL YEAR		
Interest on Bonds.....	$326,510.00	$.....
Payments into Sinking Fund.....	146,380.00	.....
Operation, Maintenance, etc.....	200,963.89	.....
Refund of Meter Deposits.....	1,450.25	.....
Construction, Extending Mains, Improvements, Hydrants, etc.....	106,556.31	.....
Purchase of Water Works.....	108,049.00	.....
Tools and Equipment Purchased.....	4,269.26	.....
Meters Purchased	8,478.09	902,656.80
Available Balance of Water Fund November 30, 1916		$103,730.55

Increase of Water Revenue over 1915, 7.96 per cent. Said increase due to the annexation of Linnton and St. Johns, and the full collection of the first quarter's revenue, which last year was partly lost, due to the establishment of the quarterly system of collection in arrears.

INVENTORIES—REAL ESTATE

Name	Location	Area in Acres	Value of Land	Value of Improvements
Old reservoir site	All of Blk. 32, Carruthers Add., Broadway and Lincoln Sts	.92	$ 100,000	$ 1,000
Portland Heights reservoir site	Blk. K," Greenway Add	.51	5,000	11,114
Repair and meter shop	S. E. ¼ of Blk. 150, Portland, 4th and Market	.25	125,000	1,000
East Side Water Office	Lot 8, Blk. 139, East Portland, E. 7th and E. Alder Sts.	.11	8,500	23,415
Site of Old Irvington standpipe	Lots 5 and 6, Blk. 257, Holladay Add., E. 13th and Schuyler Sts	.22	4,500	.....
Former pumping station	Tract foot of Sherman St	.50	12,000	.....
Bull Run conduit No. 1 and 2	Tract foot of Stephens St	.60	7,500	.....
Reservoir No. 3 and 4	Adjoining Washington Park	63.10	189,000	569,000
Water Tanks	Portland Heights	.04	600	.....
Water Tanks	Willamette Heights	.06	500	2,500
Albina Warehouse	Blk. 73, Albina, Randolph and Loring Sts	1.00	40,000	5,000
Albina water office, shop and stable	Part of Blk. 25 and 26, Albina, Russell St., between Williams Ave. and Rodney Ave	.29	7,000	32,310
Old Highland Tank site	Lot 4, Blk. 6, Maegley Highland, Union Ave., between Wygant and Going Sts	.10	2,500	.....
Old tank site, Brown's system	E. 60th and Foster Rd	.08	700	.....
Old tank site, Brown's system	Lot 1, Blk. 1, Pomona Add	.08	300	.....
Old tank site, Brown's system	Lot in School Park Add	.01	50	.....
Old tank site, Brown's system	Lot 5, Blk. 22, Saginaw Heights	.10	300	.....
Vernon standpipe	Tract E. 20th and Prescott	2.34	11,000	12,000
Palatine pump station	.....	21.00	60,000	10,000
High service reservoir (No. 1)	Mt. Tabor	5.75	28,000	134,000
Low service reservoir (No. 2)	Mt. Tabor	10.00	50,000	121,000
Reservoir 5 and 6	Mt. Tabor	45.17	150,000	690,000
Standpipe	Near Lusted's	.50	100	.....
Headworks	Clackamas & Multnomah Counties	4360.00	150,400	16,597.93
Standpipe	Council Crest	.25	900	2,200
Pump station	Old Kinzel Park pump station, E. 76th and Yamhill Sts	1.00	2,000	200
Tract for water tanks	Ext. 19th St. 100 ft. south of Spring St	.025	500	.....
Reservoir No. 2	S. 60ft L. 32 and 33, Blk. 20, 1st Add. to Linnton	.07	150	2,890
Reservoir No. 3	Lower Whitwood, Linnton	.23	500	2,890
Reservoir No. 4	Upper Whitwood, Linnton	.23	500	3,102
Reservoir No. 6	Part L. 8, Blk. 28, Willalatin, Linnton	.23	500	2,890
Reservoir No. 7	Lower Willbridge, Linnton	.22	475	3,102
Reservoir No. 8	Upper Willbridge, Linnton	.13	280	1,440
Whitwood Court Pump	L. 1, Blk. 24, Whitwood Court, Linnton	.60	1,475	212
St. Johns Tank	L. 1, 2, 7, 8, Blk. 14, St. James John 2nd Add	.44	2,500	2,250
St. Johns Pump	L. 1, 2, 7, 8, Blk. 2, Adams Add. to St. Johns	.44	2,500	5,861

PERSONAL PROPERTY ON HAND

Material for mains	$181,561.56
Material for Bull Run conduits	2,394.50
Material for submerged pipe	28,048.80
Meters	2,394.70
Tools and portable property, November 30, 1916	51,050.58

DISTRIBUTION OF WATER RECEIPTS

Operation and maintenance	26.36%
Interest on bonds	42.84%
Deposited in Sinking Fund	19.20%
Available for improvements, etc	11.60%

CHARGES FOR WATER DURING 1916

Flat rate, ordinary dwelling, per annum	$7.20
Meter rates, minimum, per annum	6.00
Meter rates, first 150,000 gallons, per 1,000 gallons	.13 1-3
Meter rates, over 150,000 gallons, per 1,000 gallons	.10 2-3

SERVICES—NOVEMBER 30, 1916—DETAILED STATEMENT

	Active Services	Vacancies
Dwellings, including flats	45,394	7,479
Dwelling and store combined	318	56
Apartment houses	432	6
Hotels, lodging houses, etc	650	46
Manufactories	229	26
Stores, restaurants, etc	1,916	649
Office buildings, banks, etc	181	10
Churches	161	8
Schools—Public and private	189	.....
Laundries	91	4
Fire protection	511	16
Elevators	170	40
Miscellaneous	2,351	518
Total number actually paying water rates for November, 1916	52,593	8,858
New services installed during the year	849	.....
Total services November 30, 1916	.....	61,451
Total services metered	.....	16,986
Percentage of all services metered	.....	27.66
Dwellings served	.....	52,873
Percentage of dwellings metered	.....	23.25
Places other than dwellings served	.....	8,578
Percentage of places other than dwellings metered	.....	54.68

Dwellings metered are those where water is likely to be wasted and all places on higher elevations supplied by pumping system.

Of the above new services installed, 1,638 are included which were acquired by the purchase of the water system of St. Johns from the St. Johns Water Works & Lighting Co. on April 1, 1916—of this number 135 were metered.

SUMMARY OF RECEIPTS AND DISBURSMENTS OF THE BUREAU OF WATER WORKS DURING THE PAST THIRTY YEARS OF MUNICIPAL OWNERSHIP

Gross earnings	.....	$13,266,433.65
Due from the City for water for fire protection, sprinkling, etc.	.....	823,589.35
Cash receipts for water sold	.....	$12,442,844.30
Miscellaneous receipts	.....	79,153.28
Bonds sold by City of Portland, 1886 to November 30, 1916	$8,169,000.00	.....
Less discount on bonds sold	47,776.35	8,121,223.65
		$20,643,221.23
EXPENDITURES		
Private water works purchased and improved	$ 1,208,700.38	.....
Gravity system and improvements	5,597,539.68	.....
Extending mains, etc.	5,468,946.41	.....
Meters, tools, etc., on hand	135,722.40	.....
*Total cost of property	*12,410,908.87	.....
Operation and repairs	2,770,637.24	.....
Meter deposits refunded	16,845.40	.....
Interest on bonds	4,311,879.17	.....
Payments into Sinking Fund	1,029,220.00	$20,539,490.68
Available balance on hand November 30, 1916	.....	$ 103,730.55

*Not including $400,000.00 bond issue assumed by the annexation of East Portland and Linnton.

DISTRIBUTION OF WATER RECEIPTS

Operation and maintenance	22.27%
Interest on bonds	34.65%
Deposited in Sinking Fund	8.26%
Improvements and extensions	34.82%

PRESENT BONDED INDEBTEDNESS PAYABLE OUT OF WATER FUND

Jan. 1, 1887	Jan. 1, 1917	5%	Purchase of water works	$ 700,000
July 1, 1893	July 1, 1923	5%	Construction of Bull Run system	2,200,000
Jan. 1, 1911	Jan. 1, 1936	4%	Construction of additional pipe line and purchase of property	500,000
March 1, 1911	March 1, 1936	4%	Construction of additional pipe line and purchase of property	500,000
Oct. 1, 1911	Oct. 1, 1936	4%	Construction of additional pipe line and purchase of property	500,000
March 1, 1912	March 1, 1937	4%	Construction of additional pipe line and purchase of property	500,000
Nov. 1, 1912	Nov. 1, 1937	4%	Construction of additional pipe line and purchase of property	250,000
June 1, 1913	June 1, 1938	4%	Construction of additional water mains and purchase of property	242,000
Aug. 1, 1913	Aug. 1, 1938	4%	Construction of additional water mains and purchase of property	75,000
Sept. 1, 1913	Sept. 1, 1938	4%	Construction of additional water mains and purchase of property	250,000
Nov. 1, 1913	Nov. 1, 1938	4%	Construction of additional water mains and purchase of property	22,000
Dec. 1, 1913	Dec. 1, 1938	4%	Construction of additional water mains and purchase of property	285,000
Feb. 2, 1914	Feb. 2, 1939	4%	Construction of additional water mains and purchase of property	175,000
Dec. 1, 1914	Dec. 1, 1939	4%	Construction of additional water mains and purchase of property	135,000
March 1, 1915	March 1, 1940	4%	Construction of additional water mains and purchase of property	460,000
April 1, 1916	April 1, 1941	4%	Construction of additional water mains and purchase of property	125,000
May 1, 1891	May 1, 1921	6%	Construction of water system (former City of East Portland	250,000
April 1, 1913	April 1, 1933	5½%	Construction of Linnton water system	100,000
May 1, 1915	Serial	5½%	Construction Linnton water system	50,000
Total bonded indebtedness				$ 7,319,000

Payable out of Bonded Indebtedness Interest Fund, as per charter amendment of June 3, 1907; amended June 7, 1909, and November 8, 1910:

Jan. 1, 1909	Jan. 1, 1934	4%	Construction of additional pipe line and purchase of property	250,000
June 1, 1910	Jun. 1, 1935	4%	Construction of additional pipe line and purchase of property	500,000
Sept. 1, 1910	Sept. 1, 1935	4%	Construction of additional pipe line and purchase of property	500,000

PRESENT PLANT VALUE

Total appraisal value of Water Works property, 1903	$ 6,516,000.00
Improvements and extensions to November 30, 1916	4,186,103.46
Reservoir improvements	242,496.17
Third submerged pipe across Willamette River	119,789.55
Purchase of water plants (private)	239,417.98
Purchase of property, erecting building and improvement of real property	105,888.68
Bull Run Conduit No. 2 and Reservoirs Nos. 5 and 6	2,311,444.64
Preliminary work on new headworks and reservoir sites	44,139.10
Lowering submerged pipe across Willamette River	84,845.37
Dwellings and headquarters Bull Run Headworks	17,094.36
Surveys of Bull Run Reserve	18,411.77
Redemption of bonds for water main assessments	284,469.32
Linnton Water Works annexed	144,487.11
	$14,314,587.51

CONDUITS AND RESERVOIRS

	Gallons	Increase
Conduit capacity 1903	22,500,000	.....
Conduit capacity 1915	67,500,000	45,000,000
Reservoir capacity 1903	67,000,000	.....
Reservoir capacity 1915	193,000,000	125,000,000

Respectfully submitted,

L. S. KAISER,
Superintendent.

ANNUAL REPORT OF ENGINEER WATER BUREAU FOR THE FISCAL YEAR ENDING NOVEMBER 30, 1916

Hon. Will H. Daly, Commissioner of Public Utilities, City of Portland, Oregon.

Dear Sir: Herewith I respectfully submit four your consideration a summary of construction operations carried forward under the direction of the Engineering staff of the Water Bureau during the Year ending November 30, 1916, as follows:

DISTRIBUTION SYSTEM

The tabular statement herewith shows the water main extension work completed during the year to be much less in amount than for any similar period during the past seven years.

With the exception of 0.525 miles of 12-inch, all mains laid during the year have been 8 inches in diameter and under, the practice of laying 2-inch pipes in unimproved streets in the outlying districts (adopted in 1915) having been followed to a considerable extent.

MAINS LAID BY DEPARTMENT FORCES

12-inch	0.525 miles
8-inch	3.717 miles
6-inch	1.522 miles
4-inch	0.043 miles
2-inch	2.565 miles
Total	8.372 miles

MAINS SECURED BY PURCHASE

St. Johns Plant:	
8 -inch	0.261 miles
6 -inch	5.860 miles
4 -inch	2.797 miles
2 -inch	13.596 miles
1½-inch	1.349 miles
1¼-inch	0.535 miles
1 -inch	9.690 miles
	34.088 miles
East Main Street, East 24th Street to 210 feet East:	
6-inch	0.040 miles
Total	34.128 miles

MAINS ACQUIRED BY BILL OF SALE

2 -inch	0.797 miles
1½-inch	0.148 miles
1¼-inch	0.048 miles
1 -inch	0.299 miles
¾-inch	0.086 miles
Total	1.378 miles

RECAPITULATION

Mains laid by Department forces	8.372 miles
Mains acquired by purchase (St. Johns Plant and E. Main St.)	34.128 miles
Mains acquired by bill-of-sale	1.378 miles
Total of all sizes added during the year	43.878 miles
Total mains abandoned or relaid with larger sizes	4.693 miles
Net increase during the year	39.185 miles
Total expenditures during the year account extending Mains, as per Superintendent's report	$ 87,196.66
Amount expended in purchase of Water Mains, etc.	108,173.25
Total	$195,369.91

SUMMARY

Total miles of Mains now in use, less than 4 inches in diameter	157.947 miles
Total miles of Mains now in use, 4 inches in diameter and over	580.589 miles
Total miles of Mains now in use, all sizes, (Nov. 30, 1916)	738.536 miles

The above does not include the main supply conduits, of steel and cast iron, between the Headworks and the City reservoirs, amounting to a total of 56.29 miles, ranging from 24 inches to 52 inches in diameter.

EXTENSION PROPOSED FOR YEAR 1917

In addition to laying such service mains (8 inches in diameter and under) as may be required to reinforce the service in districts not now adequately piped, and also such as may be required to be laid in streets under contract for new pavement, but few mains are proposed for the coming season.

SALMON STREET

The largest of these mains for which a Budget appropriation has been made is intended to replace the present 16-inch main in Salmon Street, from Front to 10th streets.

This main was originally laid twenty-five years ago, but has already broken several times; and, besides, it has needed joint repairs at frequent intervals during recent years, largely due, it is thought, to its location near—or almost directly under—the tracks of the Oregon Electric Railway which is located in Salmon Street between the points named. The original alignment of this pipe was not at a uniform distance from the curb line and when the railroad was built the main was not removed from under the track.

It is now planned to lay a new main on the opposite side of the street, to which the present services will be transferred, this work to be done during the coming year.

O.-W. R. & N. REGRADE

During the past year the plans for the O-W. R. & N. Co. grade crossing elimination work between East 33rd and East 82nd streets, have been perfected by the Department of Public Works, and bids for necessary reconstruction are to be opened December 6.

The taking up and relaying of water mains affected by this regrade work will form a part of the main contract and will be included in the bid-price. It is expected that this water main work will be under the supervision of this office.

MORRISON AND WASHINGTON STREETS

Heretofore estimates have been submitted for the construction of 3,700 feet of 16-inch main in Morrison Street, Fourth to Chapman; and

2,860 feet of 12-inch main in Washington Street, Fourth to Fourteenth, for the reinforcement of the West Side gridiron system, at a total estimated cost of $30,500.00, based upon current prices for material and labor when this estimate was first prepared but which have advanced materially since that time.

This work however, has been postponed until general pavement repairs become necessary in the streets named.

EXTENSIONS PROPOSED BY NATIONAL BOARD OF FIRE UNDERWRITERS

No change has been made in this list of mains since the report for the Year 1915 was submitted, and none is contemplated during the coming year.

HIGH PRESSURE FIRE PROTECTION SYSTEM

The construction of High Pressure Fire Mains in the congested business district of the City, for which a bond issue was authorized in 1907 of which amount $150,000.00 remain unsold, has, by a vote of the Council, been deferred for another year, and consequently no action will be taken towards the construction of the same during the year 1917.

REPAIRS TO MAINS

No serious break in any of the distribution mains of the City has occurred during the year, and no property loss of moment has resulted therefrom.

HOLGATE STREET

The construction of a viaduct in Holgate Street, crossing the Southern Pacific R. R. tracks, under an agreement with the City executed in October, 1915, called for the relaying of the 12-inch water main in that street.

This work was taken up early in the year.

In the final adjustment of the matter it was arranged that the cost of the water main work should be borne by the Railroad Company as a part of the viaduct construction. A report, submitted May 27, 1916, upon the completion of the work, showed the cost to the Water Bureau to have been $924.03, which amount was subsequently paid by the Southern Pacific Company, the railroad company having also performed part of the trench work with their own forces.

FIRST AND SALMON STREETS

On January 22, 1916, a leak occurred in the 16-inch cast iron water main at First and Salmon streets.

The main was laid in 1891, and has of late been subjected to the pounding of the heavy interurban trains over the Oregon Electric Railway Company's tracks which were laid in Salmon Street about 5 years ago. The location originally selected for this main now comes almost directly under the track, and hence the pipe is subjected to considerable vibration which has no doubt caused the numerous leaks which have taken place along this street during the past year.

The laying of a new main in Salmon Street, Front to Tenth streets, has already been authorized for the coming year.

PENINSULA TUNNEL

Upon request of A. Guthrie & Company, Inc., contractors for relining the O-W. R. & N. Company's tunnel in the Peninsula District, on April 13, 1916, steps were authorized to protect the water mains in Willamette Boulevard, Lombard Street and Willis Boulevard which

the contractors feared might be injured by possible settlement of the tunnel covering due to their operations.

All work of protecting these mains was performed by the repair crew of the Water Bureau and the cost of same has been billed to the contractors and paid by them, as follows:

April	$ 82.10
May	26.90
June	25.00
July	17.50
August	138.75
September	12.50
October	51.65
November	40.30
Total	$394.70

FIRST AND JEFFERSON STREETS

On April 14th a break occurred in the 24-inch cast iron main at First and Jefferson streets at a point under the S. P. R. R. track adjacent to an old fire cistern. The settlement of the pipe caused by the heavy interurban cars brought the pipe into contact with the brick arch of the cistern, starting a leak.

The water from the broken pipe caused a slight damage to the electric conduit system of the Portland Railway, Light & Power Co. at that point. After the pipe was repaired the cistern was filled with gravel and its use abandoned, a new hydrant having been installed at a nearby corner as a substitute for the abandoned cistern.

EAST BROADWAY REGRADE

On April 1, the City Engineer filed plans for the regrading and paving of East Broadway, between Union Avenue and Larrabee. This regrade work necesitated the lowering of two sections of water main, viz: at Williams Avenue and at Ross Street. The work of lowering the mains was completed July 24th at a cost of $311.00 for materials and labor, and a special report thereon was submitted August 15, 1916. It is understood that the cost of this work will be included in the regrade assessment against the property benefited.

30-INCH SUBMERGED PIPE LINE

On December 24, 1915, a leak developed in the 30-inch submerged pipe line at the Clay Street crossing of the Oregon Electric Railway Company.

In making repairs it became necessary to close down the 30-inch gate at East Third and Stephens streets, which resulted in a broken gate-stem. Fortunately a new stem was obtained at the Albina Yard so that the West Side supply was interrupted for a few hours only, water being turned on again at midnight of December 25th through the 24-inch submerged main. The repair of the 30-inch line was completed January 6th, 1916, and both lines placed in service.

24-INCH SUBMERGED PIPE LINE

On August 18th a leak developed in the 24-inch submerged pipe line, which increased until the 22nd when the waste was estimated at 1,680,000 gallons per day.

The location of this leak was not determined for several days, and then only by means of compressed air forced into the pipe. The leak

was then found to be near the West Harbor line in about 40 feet depth of water, the pipe being buried in sand and gravel on the river bottom to a depth of several feet.

A considerable delay occurred in uncovering the pipe owing to the amount of sand and gravel which had to be removed, the material taking a very flat slope under water. It was then found that a jagged hole in the steel pipe, about 4x6 inches in area, had been eaten away adjacent to the end flange of one of the pipe sections. A portion of the cast iron flange and one bolt was also worn away. This effect was probably produced by a slight leak from the flange joint impinging upon the body of the pipe where incased in sand, the cutting effect of sand and water, properly applied under pressure, being well known. After the pipe had been uncovered and the injured flange removed a new flange, in two semi- circular sections, was placed around the pipe and bolted and calked in place with lead wool, this flange being of sufficient width to properly cover the hole in the body of the pipe. A diver was employed for this work, which was not completed until October 5, 1916. A large amount of material had to be dredged and scowed away, some 2000 yards or more in volume, before the pipe was exposed so as to admit of the removal of the old flange and the placing of a new one; and in consequence the repair work proceeded slowly. This work was not completed and the pipe tested until October 16th, the total cost of materials and labor amounting to $3,207.99; or $2,279.36 in addition to the pay of the Water Department forces already employed, estimated at $928.63.

LOWERING PORTLAND HEIGHTS FORCE MAIN IN CANYON ROAD

The lowering of this pipe at certain points, due to regrade and paving of Canyon Road by the County authorities, has been in progress during the latter part of the year, but is not yet entirely completed. Estimated cost of this work as per special report of August 4, 1916, $1,554.00.

SLIDES

In March a small slide occurred in Upper Montgomery Drive which exposed and partly undermined a short section of the Portland Heights Force Main, but no leak occurred.

During the winter, slides occurred at several points where for a time it was thought the water mains were being endangered thereby, viz: The 6-inch main in Thurman Street near the end of the car line, where a section of the street slid away into the St. Helens Road some distance below. No serious harm resulted to the water main, however, although it was shut off for some time.

Another slide occurred early in the year on the West Side of Montgomery Drive, which damaged the residence of W. C. Lawrence. The 6-inch main in the street opposite was not affected by the slide, although it has since been claimed that the slide was due to a leak in this main. A claim for damages in the sum of $11,500.00 has been presented to the City by the owner of the property, upon which a special report has been submitted.

The occurrence of the several slides noted above was undoubtedly due to the unusual weather conditions and the prevalence of snow and ice for a considerable period during the winter, but no damage or interference with the water service, of special moment, can be traced thereto.

CEMENT FOR PIPE JOINTS

In connection with the work of laying and repairing water mains, it is desired to note the experiments that have been made with the use of Portland cement as a calking material for pipe joints.

In January, 1916, the use of cement for such purpose was recommended by the Bureau, such recommendation being based upon the reported success of experiments with it in certain California cities—notably Los Angeles, where it has been in use for several years. The laying of a line of 8-inch main with cement joints was therefore authorized. On March 23rd a special report was submitted showing that 1078 feet of cast iron pipe had been laid in East 30th Street with cement joints which effected a saving of about $1 per joint over the cost of lead at the then quoted price. The further use of cement as a calking material was thereupon authorized.

In April arrangements were perfected for a comparative test of lead, leadite and cement as a calking material and these tests were later carried out under the direction of Assistant Engineer Randlett at the Albina Yard. On June 30th Mr. Randlett reported upon the conditions under which the tests were made and the results obtained, his conclusions being as follows:

"The first cost of materials is greatly in favor of cement joints, with the Leadite next. The labor is in favor of the Leadite, with cement next. This item is small, however, varying from 5 to 15 cents per joint difference between the Leadite and lead, with cement probably midway between the two.

"The use of the three materials depends upon conditions which I would summarize as follows:

"1. For all ordinary work, where there is no necessity for the main to be put in service in less than 48 hours after completion, and where the ground in which the main is being laid is not excessively soft, or liable to considerable settlement, use cement.

"2. Where it is necessary to put the main in service immediately after laying, and ground conditions are such that excessive settlement may not be expected, use Leadite.

"3. Where ground is in very poor condition, and where leaks may be expected from time to time, and where it is necessary to repair joints by recalking from time to time, use lead.

"4. That cement joints should be the rule rather than the exception, and that Leadite should be used on all work not suitable for cement; and that lead should only be used in extreme cases. It seems that vibration without too much movement causes lead joints to leak first, with Leadite second, and cement last. And leaks started take up first in Leadite, second in cement, and hardly any in lead joints.

"Other conclusions:

"Oil burning furnaces should replace the old style wood or coal furnaces for melting lead or Leadite, not only because they are more economical but a proper heat is more likely to be maintained for both lead and Leadite.

"The cement used should be a medium setting cement, which agrees with other authority on cement joints for water pipe.

"The past two years this Department has been using 100 tons of lead a year, at 4¾ cents per pound. If cement were used instead it would mean a saving of about $9,000.00; while if Leadite was used it would show a saving of about $4,500.00 per year.

"With the present price of lead, the saving would be about double the above figures. F. M. RANDLETT."

As the result of our experience with cement it is now stated that the addition of about 25 per cent of sand to the cement makes it easier to handle and possibly reduces the shrinkage, and the cost, as well.

PIPE STORAGE YARD

For several years past the necessity for having improved facilities for storing and handling water main materials has been set forth in the Annual Reports of the Bureau and in the Budget estimates. It is now noted with satisfaction that steps are being taken to secure a tract of land for this purpose at East 60th Street, adjacent to the O-W. R. R. & N. Company's tracks.

SERVICE PIPES

The service pipe inspection and survey inaugurated in 1915 has been continued during the year with results especially satisfactory to the Collection Bureau. The work of recording location of services has been carried forward in connection with the foregoing by men detailed from this office. This work will be continued until the entire City is covered and each house connection recorded.

During the year the policy has been adopted of laying all house service connections, between the main and the street curb, by Water Bureau employes, the cost of same to be paid by the property owner at the rates given below which have been fixed by ordinance No. 31656 passed by the Council April 26, 1916. The ordinance also provides that these pipes will be maintained by the Bureau for a period of ten years.

Size of Pipe	Unpaved Street	Paved Street	Cost of Each Additional Foot in Excess of 18 Feet	
			Unpaved Street	Paved Street
½"	$10.00	$22.50	15c	65c
¾"	12.00	24.50	15c	65c
1"	15.00	27.50	20c	70c

In case it becomes necessary to cut concrete sidewalks and repair same for the purpose of installing curb cock, an additional payment of $5.00 shall be required.

RESERVOIRS

The following reservoirs are now in use in connection with the City distribution system, including the three wooden tanks and a concrete-lined basin taken over on April 1st as part of the St. Johns plant.

	Material	Elevation	Gallons Capacity	When Built
Reservoir No. 1, Mt. Tabor	Concrete	411.6	12,000,000	1894
Reservoir No. 2, Mt. Tabor	Brick	229.2	20,500,000	1894
Reservoir No. 3, City Park	Concrete	299.5	16,400,000	1894
Reservoir No. 4, City Park	Concrete	229.5	17,600,000	1894
Reservoir No. 5, Mt. Tabor	Concrete	411.6	50,000,000	1911
Reservoir No. 6, Mt. Tabor	Concrete	305.0	75,000,000	1911
Portland Heights	Concrete	865.0	600,000	1908
King's Heights	Concrete	865.0	200,000	1911
South Portland	Concrete	475.0	60,000	1907
Willamette Heights	Concrete	445.6	60,000	1907
Tabor Heights	Concrete	590.0	200,000	1912
Vernon Stand Pipe	Steel	343.6	360,000	1906
Council Crest Stand Pipe	Steel	635.0	114,000	1912
LINNTON DISTRICT				
Upper Linnton	Concrete	538.9	130,000	1913
Lower Linnton	Concrete	192.9	130,000	1913
Willallitan Park	Concrete	1065.6	130,000*	1913
Upper Whitwood	Concrete	566.7	130,000	1913
Lower Whitwood	Concrete	192.1	130,000	1913
Upper Willbridge	Concrete	768.3	65,000*	1913
Lower Willbridge	Concrete	189.9	130,000	1913
ST. JOHNS PLANT				
St. Johns Reservoir	Concrete	154.7	325,000	1905
St. Johns North Tank	Wood	237.3	100,000	1906
St. Johns Middle Tank	Wood	218.8	35,000	1904
St. Johns South Tank	Wood	237.2	100,000	1906
Total gallons capacity			194,759,000	

*Discontinued October, 1915.

RESERVOIRS NOS. 1 AND 2, MT. TABOR

The basins at Reservoirs Nos. 1 and 2, Mt. Tabor, have not required special attention during the year and no expense has been incurred for repairs in connection therewith.

RESERVOIR NO. 3, CITY PARK

The waterproofing of the dam at this reservoir was discussed in the report for 1915, the work having already been authorized.

During the past season this work was undertaken by F. B. Gilman & Company, Agents, who submitted a bid on July 31st for applying a waterproofing coat of "Insulite" to the water face of the dam for the sum of $384.00, or 6 cents per square foot.

This work was completed August 31, 1916, the effectiveness of the coating being guaranteed by the Company. The testing period, however, has not yet fully passed, but the present indications are not favorable for the complete success of the waterproofing work.

In addition to the contract price named for the application of the "Insulite" coating, Water Bureau forces were employed in cleaning and repairing the face of the dam at an approximate cost of $674.33.

RESERVOIR NO. 4, CITY PARK

No appreciable amount of work has been done during the year in the repair and maintenance of this structure. The west parapet and fence, reported one year ago as in need of repair, has not been touched during the year and but slight change in its appearance is noted.

RESERVOIRS NOS. 5 AND 6, MT. TABOR

The condition of these reservoirs has remained practically unchanged during the year, no repairs being required other than to renew the galvanized wire screens over the Inlet at Reservoir No. 5.

Telephone communication between the reservoirs at Mt. Tabor has been improved by the placing of the wires underground through the Park property.

The fountains at Reservoirs Nos. 2 and 6 have been in operation during a portion of the time. A readjustment of the pipes supplying the jets at Reservoir No. 6 will be necessary before these fountains can be operated effectively at all stages of water in the reservoir basins.

OTHER RESERVOIRS AND STANDPIPES

The several smaller concrete-lined reservoirs and steel standpipes connected with the City distribution system have required little attention during the year and but small expense.

It is noted, however, that the Vernon Standpipe should receive a coat of paint at an early date, preferably during the coming season, an item covering this work having been inserted in the expense budget for the year 1917, the work not having been completed in 1916 as at one time planned.

A slight leak occurred in the expansion joint at the bottom of the Tabor Heights Reservoir, which was repaired at small expense. A special report was submitted on October 23rd, recommending that steps be taken to exclude visitors and prevent children from using the concrete roof on the top of this tank for a playground.

The valve for controlling the supply for the Kings Heights Tank should be replaced with one of approved type.

At the Greenway Reservoir on Portland Heights, a contract was made on April 17th with H. W. Hopkins for the construction of a rock face wall along the Talbot Road front of the Reservoir property for the protection of the high bank caused by excavation for the street improvement ordered by the Council. This work was completed and accepted June 13, 1916. Contract price, $380.00.

At St. Johns the wooden tanks have received slight repairs in order to reduce leakage. All of these tanks and the standpipes are visited at regular intervals by the Bureau inspectors.

PUMPING STATIONS

The following pumps are now in use:

	Style of Motor	Elevation	Elevation Supplied	Gallons Per Day Capacity
City Park	Hydraulic	230	445	1,000,000
City Park	Hydraulic	230	865	500,000
City Park	Electric	230	865	500,000
Council Crest at Greenway, Portland Heights	Electric (automatic)	865	1096.5	220,000
Fulton	Electric (automatic)	230	635	250,000
Reservoir No. 2	Hydraulic	230	590	216,000
Palatine Hill, Broadway and Lincoln	Auxiliary Steam Plants.			
Linnton	Electric (automatic)	190	537	108,000
Whitwood	Electric (automatic)	190	565	108,000

CITY PARK STATION

On June 8, 1916, steps were taken looking to the installation of an additional pump and electric motor at the City Park station for the reinforcement of the supply for the Portland and Kings Heights districts during the dry weather period.

On September 11th bids for pump and motor were received by the Purchasing Agent and referred to the Engineer who recommended that all bids be rejected and new proposals invited. Later, specifications were prepared and proposals invited for furnishing a water power motor and pump for the above service, bids to be opened on December 7, 1916.

MT. TABOR PUMPS

On December 14, 1915, the water power pump installed at Reservoir No. 2 for the supply of the Tabor Heights district went out of service due to the breaking of the plunger guide. Repairs were completed the next day, the Tabor Heights Reservoir (200,000 gallons capacity) being ample to supply the district during the interval.

On August 6th and 10th this pump was again disabled owing to cracks which developed in the main pump frame, and as a temporary measure, two small pumps and electric motors were installed, the pump at Willalitan and one one at Willbridge in the Linnton district being taken to Reservoir No. 2 and connected with the Tabor Heights force main. It is now in contemplation to connect these two pumps with the Pelton Water Wheel already installed and discontinue the use of the electric motor. This being accomplished, no attempt will be made to repair the single pump heretofore depended upon, on account of the excessive cost, the two smaller pumps being about equal in capacity to the one formerly used.

COUNCIL CREST PUMP

On December 14, 1915, the automatic electric motor and pump installed at the Greenway Reservoir for the supply of the Council Crest district went out of service owing to the burning out of the carbon on the motor. Repairs were completed the same day.

On March 25th the Council Crest Standpipe became empty owing to the breaking of the electric control line between the standpipe and the pump. The pump, however, was started early on the day on which the break occurred and no serious inconvenience resulted from the emptying of the reservoir for a few hours in the early morning.

FULTON PARK PUMP

The automatic pump installed at Fulton for the supply of the Burlingame Standpipe has been successfully operated throughout the year.

During the month of May, 1916, some 900 feet of copper wire, forming a portion of the control between the Burlingame Standpipe and the pump, was stolen, making it necessary to have an attendant operate the pump during the time repairs were being made.

LINNTON PUMPS

On December 10, 1915, the motor and control operating the Lower Whitwood pumping station burned out. Repairs were completed on December 21, 1915.

In August, two of the unused pumps from this district were transferred to Reservoir No. 2 for the temporary supply of Tabor Heights. It is now contemplated to install these pumps permanently at that point, in place of the single Smith-Vaile pump heretofore used.

PALATINE HILL STATION

This plant has been turned over four times during the year. The boilers of the north battery have been cleaned and suspended from new beams, new pipes installed in blow-off and two new tubes put in.

This plant is now in fair shape for a limited amount of work. Should an emergency arise for continued service, additional repairs will be necessary.

The dwelling house on this property is in bad condition and should receive very considerable repairs. This house is a two-family structure and it is a question if it would not be more economical to wreck the present house and use the material so far as possible in the construction of a smaller, more modern house for the use of the keeper. The cost of this reconstruction has been estimated at not to exceed $1,000.00. This is upon the supposition, of course, that the property will be held by the Department for some time to come.

SEVENTH AND LINCOLN

This plant has been turned over four times during the year. Boilers have been cleaned and inspected and some corrosion found, but no scale. One of the boilers is hardly in condition to operate for any great length of time, the other being in reasonably good condition. In general, the plant is in running condition, with the exception of the condensors which require retubing. This would involve considerable expense, but after the installation of another unit at the City Park station this plant will probably not be called upon for service.

REGULATING VALVES

The following is a list of pressure regulators maintained during the year in order to insure satisfactory pressures in the street mains at all points. These have regularly received attention by skilled inspectors and kept in proper working order. The size, elevation and pressure on both high and low pressure sides of the regulators are as shown below, viz:

Pressure Reg.	Size	Elevation	High	Low	Kind
			lbs.	lbs.	
E. 38th and Woodstock	8″	206.0	78	22–25	Mueller (old)
E. 33rd and Ainsworth	3½″	146.0	82	40	"
E. 13th and Holman	8″	160.8	78	38–40	"
5th and Witham	4″	387.4	105	40	"
Kelly and Custer	3½″	252.0	95	40	"
17th and Elizabeth	4″	640.0	100	40	"
Myrtle and Chapman	4″	512.0	93	35	"
21st and Clifton	3½″	497.5	100	40	"
Chula Vista and Hermosa	4″	654.8	95	30	"
Macleay and Melinda	4″	506.0	90	30	"
Fairview and Rutland	3½″	492.0	95	40	"
Fairview and Alley	4″	639.7	100	40	"
Davenport and Alpine	1½″	584.7	122	40	"
Mill Street, Whitwood Court	6″	.....	61	30	Ross
Springville Road	6″	423.1	52	28	"
Willamette near Ida	8″	150 Ap	78	40	Mueller

AUTOMATIC PRESSURE RECORDING GAUGES

Bristol Recording Pressure Gauges have been maintained at the following points and have rendered valuable assistance in determining areas of low pressures and inadequate supply during the period of maximum consumption. The record sheets when removed are filed as a part of our office records and are found to furnish a complete record of the kind of service the Department is giving in the various districts of the city.

Bristol Gages	Elevation	Pressure
Vernon High	251.52	70 lbs.
Vernon Low	251.53	40 "
Russell, 297 Sacremento	157.82	64 "
Portland Heights	.....	275 "
N. & S. Portland Pump	.....	125 "
123 E. 27th St. (Alder)	43.24	81 "
59th Ave. & 77th Street	239.01	74 "
Northern Sub	148.04	85 "
Engine No. 20, 13th & Tenino	122.76	47 "
City Hall, High	66.00	97 "
City Hall, Low	66.00	67 "
St. John Pumping Station	81.94	70 "

ST. JOHNS PLANT

The plant of the St. Johns Water Works and Lighting Company, supplying the City of St. Johns, annexed to the City of Portland in July, 1915, was appraised and taken over by the Water Bureau at a valuation of $108,000.00, effective April 1, 1916.

The pumps connected with the plant were operated by the Water Bureau until May 22, 1916, when connection was made with the City mains and Bull Run water supplied thereafter, the use of pumps being thereupon discontinued.

Estimated area of the annexed district, 3.34 square miles.

Estimated population, 8000.

The water works plants taken over by the Water Bureau comprised the following pumps, reservoirs and water mains:

PUMPS

Two Gardner Compound Duplex pumps, 14x20x14x12 inches, 12-inch suction and 10-inch discharge.

Two Kewaunee boilers, 54 inches by 16 feet; 44 4-inch tubes.
One Gardner feed pump, 5½x3½x5 inches; 2-inch suction; 1½-inch discharge, and pipe connections.

RESERVOIRS

Two Wood tanks of 100,000 gallons capacity each.
One tank of 35,000 gallons capacity.
One concrete lined Reservoir of 325,000 gallons capacity.

WATER MAINS

Size Inches	C. I. Miles	Steel or W. I. Miles	Wood Miles	Total Miles
1		9.690		9.690
1¼		0.535		0.535
1½		1.349		1.349
2		12.722	0.874	13.596
4	2.305		0.492	2.797
6	5.684	0.176		5.860
8	0.195		0.066	0.261
Totals	8.184	24.472	1.432	34.088

On November 8, 1916, the steam plant, including boilers, pumps, steam suction and discharge piping, was sold at public auction to S. Howitz, for the American Jobbing House, for the sum of $1,315.00, and the purchaser has since removed the materials from the property of the City.

METERS

During the year the installation of large meters of the Venturi type, purchased for use on the distribution mains leading from the reservoirs and pumps to the several districts of the City, was completed according to the schedule outlined in the report for the year 1915.

These meters are now installed at the following points:

Size	Type	Location	Installed	District Supplied
52″	Venturi	Headworks	1911	Conduit No. 2.
44″	"	Mt. Tabor Res. No. 1	1911	Reservoir No. 5.
30″	Premier	Mt. Tabor Res. No. 5	June, 1916	Highland Main.
24″	"	Mt. Tabor Res. No. 1	1907	Highland Main.
20″	"	Vernon Standpipe	Jan., 1916	High Peninsual Dist.
30"	"	Mt. Tabor Res. No. 1	June, 1914	Lents District.
30"	"	Reservoir No. 6	July, 1911	E. Side Intermediate.
24"	"	Reservoir No. 2	Jan., 1916	Low Grav., E. Side.
6″	"	Reservoir No. 2	Jan., 1916	Tabor Heights.
24″	"	Reservoir No. 4	June, 1915	Low Grav., W. Side.
18″	"	Reservoir No. 3	1915	High Grav., W. Side.
12″	"	Reservoir No. 4	Dec., 1915	Portland Heights.
12″	"	Reservoir No. 4	Dec., 1915	Kings Heights.
10″	"	Reservoir No. 4	Dec., 1915	Willamette Heights.
8″	"	Reservoir No. 4	Dec., 1915	South Portland.
10″	"	Fulton Park	April, 1916	Burlingame Standpipe.
6″	"	Greenway Reservoir	March, 1916	Council Crest.

The meters installed this year have been in use ten months, or over. By means of the automatic records of these meters as listed above, and by prorating for the missing months, we have been able for the first time to determine closely the amount of water actually required to supply the City for the entire year. By analyzing these

records by days and months it will be possible to determine the "peak load" at any season which is, of course, the most important factor in determining the adequacy of the supply at all seasons.

The installation of these meters is noted with satisfaction as being a decided step in the advance towards securing an intelligent and comprehensive supervision of the City's water supply.

In order to secure the best and most satisfactory results the work of installing meters upon house services should be continued until all service connections are so supplied. At this date only twenty-seven and two-thirds per cent of the services are so metered.

Expended during the year account installation of Venturi Meters, $10,198.28.

RECAPITULATION OF COST OF CONSTRUCTION AND REPAIR WORK

Extendnig Mains	$ 87,196.65
Repairs to Mains (@ $11.64 per mile)	8,601.62
Submerged Pipes	3,207.99
Portland Heights Force Main	1,554.00
Reservoir No. 3	674.33
Greenway Reservoir	380.00
Bull Run Conduits	7,628.12
Inspector's Residence	1,403.50
Bull Run Reserve Surveys and Explorations	5,895.00
Purchase of Mains	108,173.25
Total	$224,714.46

LEAKAGE FROM RESERVOIRS

The larger distribution reservoirs of the City, with the exception of Nos. 1 and 2, are each provided with a system of under-drains for collecting and carrying away any seepage water which may escape through the joints of the body of the concrete linings. These drains provide for a free escape of the water, and thus the danger of back pressure is avoided when the basins are being emptied. Observations of the flow from these drains are made from time to time and estimates of its volume are recorded.

No exact measurements of this volume are possible under present conditions, but the following estimates are close approximations of the probable amount:

Reservoir No. 1	(Not measured)
Reservoir No. 2	(Not measured)
Reservoir No. 3	51,000 gals. per day
Reservoir No. 4 (average from drainage tunnel and basin)	4,000 gals. per day
Reservoir No. 5 (average flow)	530,000 gals. per day
Reservoir No. 6 (north half—average flow)	162,000 gals. per day
Reservoir No. 6 (south half—average flow)	176,000 gals. per day

The foregoing amounts have been used in checking against the total flow through Conduits Nos. 1 and 2, from Bull Run to the city, in order to determine the approximate yearly consumption.

Reservoir No. 6, Drain along south margin of reservoir tract, maximum March 26th, 1916	99,000 gals. per day
Reservoir No. 6, Minimum, summer months	00 gals. per day
December 5th, 1916, observed flow	21,000 gals. per day

DRAINAGE TUNNELS AT CITY PARK

Observations of the flow from the drainage tunnels under the Sliding Land Tract at the City Park show a maximum flow of 123,600 gallons on March 25, 1916, and a minimum flow of 15,400 gallons per day in October and November.

Instrumental measurements of the movement of the slide were taken in March, July and October.

The recorded average movement for the year was 0.60 inches, this being the average at 48 stations along a central belt 100 feet wide, extending from the eastern to the western margin of the slide, the observed movement at these stations being used in figuring the average as above.

Total number of stations observed, 225. covering the entire area of the slide.

Total observations, 662.

ADDITIONAL RESERVOIRS

The necessity for additional storage reservoirs in the West Side district has been discussed in former reports, but heretofore action relating thereto has been deferred until a more convenient season.

In the Budget for the Year 1917 there has been included an item of $50,000.00 for the purpose of securing a suitable site for such a reservoir.

If possible, this reservoir should have a storage capacity of not less than 50,000,000 gallons, but owing to the contour of the hills adjacent to the City it will be difficult to secure a suitable site for a reservoir of this capacity.

DR. LYON'S SUIT

On September 1, 1916, Dr. W. T. Lyon, residing at the northeast corner of East 60th and Stephens streets, adjacent to the property of the City, now occupied as the site of Reservoir No. 6, filed suit against the City in the sum of $1,200.00 claiming that his house had been injured in that amount by the water draining from the City's property on to his own lot and weakening the foundation of his house. It is not claimed that the water comes from the reservoir basin, as none is observed during the dry weather period, but rather it is claimed that the construction of the reservoir interfered with the natural surface drainage of the reservoir property, thus causing an unusual amount to find its way to and around the foundations of the house, weakening the same and endangering the safety of the owner and his family.

The City's contention is that conditions of which complaint is made have not been caused by the construction of the reservoir.

This suit has been set for trial in the Circuit Court on February 9, 1917.

BULL RUN CONDUITS

Bull Run Conduits Nos. 1 and 2, between Headworks and Mt. Tabor reservoirs, have been in constant service throughout the year with but slight interruptions.

These conduits comprise the following mileage of steel mains:

Bull Run Conduit No. 1, completed in 1893-4, consists of 10.022 miles of 42-inch riveted steel pipe, thickness ranging from No. 6 to ⅜ inch plate; 7.772 miles of 35-inch riveted steel pipe, No. 6 plate; 6.505 miles of 33-inch riveted steel pipe, No. 6 plate; making a total of 24.299 miles, length of Conduit No. 1.

Bull Run Conduit No. 2, completed in 1911, consists of 10.018 miles of 52-inch lock-bar steel pipe 1-4 to 7-16 inch plate; 14.742 miles of

44-inch lock-bar pipe ¼-inch plate; total length of Conduit 24.760 miles, total length Conduit No. 2.

In the Annual Report for the year 1915 mention was made of a break in the power flume of the Portland Railway, Light & Power Company near the company's reservoir at Bull Run, which appeared at one time to threaten the safety of these conduits which pass below the flume and but a short distance away.

On March 26, 1916, a leak in the 52-inch lock-bar pipe (Conduit No. 2) was observed at a point opposite the former break in the flume line, and near the point where the flow from the broken flume crossed the pipe lines. This leak was apparently due to a distortion of the pipe, either by some slight settlement or by a lateral movement, or by a combination of the two, which resulted in breaking several rivets. Surveys were commenced at once to determine the extent of the movement, if any had occurred, and have been continued at intervals since that date.

On November 15th a leak occurred in the 42-inch pipe, forming a part of Conduit No. 1, at a point 1000 feet west from the earlier leak in Conduit No. 2, several rivets in the circular seam having been broken.

The surveys so far undertaken have not yet been continued a sufficient length of time to determine if there has actually been a displacement of the conduits at the point noted; but further instrumental observations will be undertaken.

An appropriation has also been made for the sinking of some test pits along the line of the pipe, near the points of distress already noted, for the purpose of determining the character of the underlying material.

At the time the Mt. Hood Company constructed the Bull Run Power plant, located at the edge of the river channel about 1000 or 1500 feet distant, and from 200 to 300 feet below, the conduit line (this plant plant now being owned by the P. R L. & P. Co.) they had some difficulty with sliding ground which interfered with their construction operations. An area several acres in extent was apparently underlaid by a stratum of clay which was very unstable. It is among the possibilities that some remains of this clay stratum may extend up the hill as far as the conduit line, but this has not heretofore been considered probable. The investigations now in progress will help to determine the facts in the case.

During the year 1914 a section of Conduit No. 1 in the vicinity of Gresham was uncovered and the outside of the pipe cleaned and painted and repairs made where the steel plates had been seriously pitted so that leaks would be likely to occur in the near future. A total length of about 5000 lineal feet of this conduit was repaired at that time, at an average cost of $2.62 per lineal foot.

During the years 1915 and 1916 no work of this character was undertaken, but in the Budget for the year 1917 an appropriation of $15,000.00 has been made for the continuation of this repair work during the next season. It is proposed that this work shall be undertaken during the dry weather period, when the cleaning and painting of the pipe can be carried forward to the best advantage. The work of cleaning the outside surface of the pipe, preparatory to painting, is a laborious process and investigations are now in progress to determine if this work cannot be expedited and the cost lessened by the purchase of a portable air compressor plant for the operation of a

sandblast. Such a machine can be used for other purposes and will form a desirable addition to the plant of the Water Bureau.

Total expenditures during the year account Conduits Nos. 1 and 2, $7,628.12.

INSPECTOR'S RESIDENCE

On May 18, 1916, plans were submitted for a new bungalow for the residence of the pipe line inspector at Sandy Station. Estimated cost, $1,500.00.

On June 28th a contract was awarded to E. L. Sanborn (contract dated July 3, 1916) for the construction of this building for the sum of $1,396.00. The contract was completed August 18, 1916. Total cost as per contract, including extra work amounting to $7.50, $1,403.50.

HEADWORKS

In January, 1916, a special report was submitted stating the reasons why it was thought advisable to delay the construction of a new dam and intake basin at the Headworks, as provided for in the plans and estimates previously submitted. It was then concluded that the expenditure of a comparatively small sum would improve present conditions to such an extent as to render the larger expenditure unnecessary for a term of years, the length of time this work can be delayed, depending upon the growth of the City and the consequent demand for increased water supply beyond the amount now furnished by the conduits in use under present conditions. Before reaching this conclusion, new plans and estimates were worked up and revised estimates were made of the increased flow in the conduits which could be expected under the conditions brought about by the construction of the new dam. As stated above, the conclusion reached was to delay the work for the present, and the Engineer so recommended. The Engineer also recommended a slight change in the present canal, consisting of an enlargement or widening of the canal at the lower, or intake, end so as to provide for about 50 per cent greater screen area, thus reducing the velocity of the current and making the screens easier to operate. Also the construction of a shear boom at the upper end of the canal so as to turn the gravel down stream and prevent its entering the canal, as it now does to a greater or lesser degree at every high water stage. An item covering this work appears in the Budget estimate for the year 1917 ($10,000.00).

BULL RUN RESERVE: SURVEYS AND EXPLORATIONS

The maps of the survey of the Bull Run and Little Sandy watershed areas, made in 1915, were completed early in the year. Later in the season an instrumental party was organized under Assistant Engineer B. S. Morrow, which was employed for several months completing the power plant surveys on the main Bull Run River, commenced in 1915, which involved the construction of several miles of new trails.

An investigation and survey of the power possibilities of the Zigzag and Sandy rivers above the mouth of the Salmon river was also undertaken and estimates of cost prepared.

A special report upon the possibility of developing power for a municipal lighting plant within the district covered by these surveys was submitted under date of November 22, 1916. From this report it appeared that a plant which could develop approximately 7000 horse-

power for a 12-hour day could be installed within the limits of the reserve, provided storage basins were secured of sufficient size to control the flow of the stream for a 12-hour period. While this storage might be so arranged that ultimately it would form a part of the domestic supply for the City yet the amount of power thus available would only suffice for street lighting purposes. In other words, it does not appear feasible to secure from that source such an amount of power as would suffice for a general lighting plant, such as has been installed at both Seattle and Tacoma as a part of the municipal lighting system. The plan now under consideration contemplates submitting to a vote at the next City election, in June, 1917, the question of the issuance of bonds in sufficient amount to construct a hydro-electric plant for municipal street lighting purposes.

BULL RUN LAKE

Observers were stationed at Bull Run Lake during the entire working season to record the daily change in water levels of the lake and the volume of the flow therefrom. These men were also engaged in the construction and the improvement of trails in the vicinity of the cabin at the north end of the lake. The results of the season's observations of the flow from the lake were very satisfactory. It has been demonstrated that the dam constructed in 1915 at the outlet to the lake was effective in conserving the runoff from the lake watershed. It may be said that while the lake did not fill during the winter and spring to the top of the 10-foot dam, reaching instead only to a point 3 feet below the overflow, yet the lowest stage reached during the season was about 12 feet higher than the low water of 1915.

Further observations were also made defining the limits of the lake shore area through which the stored water percolates freely. It is now believed that this area can be blanketed with a covering of clay at small expense, which will still further control and regulate the outflow.

The expense incurred during the season on account of work outlined above may be stated as follows:

Expense of two observers and trail workers	$1,100.00
Additional labor for trail work	530.00
Engineering party, power surveys on Bull Run and Sandy Rivers	4,000.00
Record of flow from Little Sandy and from Clear Fork and Lost Creek branches of the main Sandy	265.00
Total	$5,895.00

In addition to the surveys made within the reserve limits under the direction of Assistant Engineer Morrow, Commissioner Daly, accompanied by Engineer Clarke and Assistant Engineer Morrow and Mr. Gallup, photographer, spent several days (September 5th to 8th inclusive) in examining the work done in the vicinity of Bull Run lake, the party entering the reserve from the south and returning from the lake along the northern rim of the watershed, and noting especially the operations of the Bridal Veil Lumber Company in cutting and removing timber from their holdings in the vicinity of Larch Mountain.

Since the above date, or on October 26, 1916, the Bridal Veil Lumber Company submitted to the U. S. Forestry officials a proposal to exchange certain logged-off areas owned by the company in the re-

serve for other lands owned by the government and situated farther away from the main water course, but still on the main water-shed slopes, the basis of the proposed exchange being practically two acres of logged-off land for one of timbered land. This proposal is being considered by the officials who are acting under the authority granted by the recent act of Congress authorizing exchanges of this character for the purpose of eliminating, or consolidating, private holding within the reserve.

The Taylor-Cameron Company, now operating a sawmill at Ames, near the western border of the reserve, owns timber lands within the reserve and water-shed limits in Section 24, Township 1, South Range 5 East, and are proposing to begin operations at that point at an early date. It would be a desirable move if the operations and holdings of this company could be eliminated from the water-shed area.

OREGON CITY EMERGENCY SUPPLY

Early in January (January 18, 1916) inquiry was made by the Water Board of Oregon City regarding the possibility of connecting with the Milwaukie mains in order that they might secure an emergency supply for use in case of a break in their 18-inch line from the Upper Clackamas.

A report upon this request was made by the Engineer which showed that the desired supply could not be secured at the point first indicated, and that it would be necessary to connect with one of the larger City mains in the Woodmere district in order to insure the supply needed. This would appreciably increase the expense and, therefore, the Oregon City Water Board decided to construct a new reservoir instead of building a pipe line to Portland. This reservoir, of about 5,000,000 gallons capacity, has been completed and is now in use.

This instance is noted as an indication of the increasing tendency to enlarge the sphere of influence of the Portland Water Bureau.

CHARACTER OF BULL RUN WATER

In view of the frequent inquiries that are made regarding the source of Portland's water supply and the character of the water, it has been thought advisable to repeat statements upon this subject found in the report for the year 1915, as follows:

In the report from this office for the year 1914, reference was made to the analysis of Bull Run Water and the report thereon forming a part of Water Supply Paper No. 363, issued by the U. S. Geological Survey in 1914.

Extracts from this paper were given in the report for last year, and are repeated herein in part as follows:

"Bull Run River flows from a small lake formed by a morainal dam lying across an upland valley near Mt. Hood. The lake discharges through its surface outlet only at high stages, usual outflowing being by seepage through the boulders of the moraine. The outflowing stream flows northwestward a few miles, then southwestward to its junction with Sandy River. A long, low rise separates this basin from the Mt. Hood glaciers, and no glacial water reaches the river. The basin comprises 168 square miles, of which the greater part is heavily forested.

"The mean annual precipitation at Bull Run post office, which is 647 feet above sea level and above which there are 96 sqaure miles of drainage basin, is 76 inches. Much of this falls as snow in winter,

but storage in the lake tends to equalize the run-off somewhat and to increase the volume of the low water flow.

"The annual run-off from the drainage basin probably averages more than 100 inches in depth over the area.

"The quality of the water of this river is important because the City of Portland diverts water from it near the town of Bull Run through two lines of pipe for a municipal supply. The entire drainage basin above the intake of the pipe lines is included in the Bull Run Forest Reserve, and trespass is prevented by efficient policing. Because of the remoteness of the upper Bull Run basin and the ideal sanitary conditions and effective patrol in it, Portland's water supply may be considered primarily pure and above criticism.

CHARACTER OF THE WATER.

"Samples of water for analysis were collected daily during the period covered by the investigations through the courtesy of the Water Board of Portland. The water is always clear, largely because of lake storage and underground flow. It is very slightly mineralized and is not subject to great changes in mineral content, as shown by the following analysis:

* * * * *

"The water typically represents surface water flowing over igneous rocks in a heavily forested region of large rainfall. It is characterized by primary alkalinity as a result of its origin among volcanic rocks, and it is alkaline carbonate in type—that is, alkalies are present in excess of alkaline earths—and carbonate comprises more than 72 per cent of the acidic radicles. It is soft and nonscaling. One of the largest laundries in Portland finds it cheaper to buy Bull Run water from the City than to use Willamette River water, which may be obtained without cost, the saving in cost of soap more than counterbalancing the cost of the water. The water will not corrode boilers or pipes as a result of its mineral content, but it may, unless first heated in an open heater, cause corrosion and rusting because of its content of dissolved carbon dioxide and oxygen. Any natural water of great purity is likely to do the same, however, and it is by no means a peculiarity of Bull Run water. The water is very slightly colored and its appearance is exceptionally attractive. The pride of the City in its water supply appears to be amply justified by the facts."

In addition to the foregoing, a detailed analysis of each sample of water is given, showing the following averages:

	Parts per million
Turbidity	Tr.
Silica (SiO_2)	9.00
Iron (Fe)	0.03
Calcium (Ca)	2.70
Magnesium (Mg)	0.53
Sodium (Na)	3.10
Potassium (K)	0.50
Bicarbonate radicle (HCO_3)	12.00
Sulphate radicle (SO_4)	3.10
Nitrate radicle (NO_3)	0.31
Chlorine (Cl)	1.30
Total dissolved solids	30.00

In view of the statement, which even now appears in print at frequent intervals, to the effect that Bull Run water comes from the glaciers of Mt. Hood, attention is called to the above report which

expressly states as follows: **"A long, low rise separates this basin from the Mt. Hoods glaciers, and no glacial water reaches the river."**

As a further testimonial to the incomparable purity of Bull Run water, I quote from a recent report of City Bacteriologist, Prof. E. F. Pernot, to Dr. M. B. Marcellus, City Health Officer, showing the result of a series of analyses of the municipal water supply of the City of Portland covering the twelve months period: December 1915 to November, 1916, inclusive. The report states:

"Analyses were made on the 14th day of each month of the water taken from the cold water faucet in the Laboratory.

"Before taking each sample the water was allowed to run nearly full force for fifteen minutes. Six plate cultures were made from each sample and the following table will show the number of bacteria per cubic centimeter as an average of six plates.

"Each sample was tested for the presence of Colon Bacilli and found to be negative.

Year	Month	Lab. No.	Bac. Per CC
1915	December	272	3
1916	January	855½	6
1916	February	1301	2
1916	March	1899½	1
1916	April	2347½	3
1916	May	2734½	3
1916	June	2929	3
1916	July	3112	13
1916	August	3306	4
1916	September	3437	2
1916	October	3658	4
1916	November	4051	8
Total			52
Average per month			4

Prof. Pernot also states that:

"This series of analyses gives the condition of the water under varying seasons of the year, and I am pleased to report that this is the purest water that I have ever had the pleasure of analyzing."

BULL RUN WATERSHED

Table Showing "Run-Off" By Years—Discharge in Second Feet

	1910			1911			1912			1913		
	Max.	Min.	Mean	Max.	Min.	Mean	Max.	Min.	Mean	Max.	Min.	Mean
January	4,520	244	1,010	5,080	408	933	10,400	160	2,090	4,610	489	1,300
February	4,272	191	933	1,120	260	480	4,240	561	1,560	2,870	359	853
March	9,490	545	2,090	1,340	240	700	583	270	416	5,980	326	1,150
April	2,060	510	970	1,050	388	601	1,070	416	577	1,680	711	1,260
May	1,550	244	619	2,680	622	1,150	1,580	494	869	1,590	594	1,120
June	555	182	249	942	298	460	811	311	477	1,000	390	647
July	191	91	132	396	135	203	444	132	238	760	180	357
August	102	80	88.7	142	83	117	1,640	92	249	178	107	141
September	91	72	83	784	80	260	1,220	156	421	847	107	247
October	1,340	171	426	926	148	335	1,630	215	630	2,800	129	698
November	4,100	180	1,350	5,230	126	1,610	4,520	394	1,410	3,330	288	860
December	2,120	328	1,050	1,880	388	850	4,270	463	1,070	1,240	250	439
For the Year	9,490	72	749	5,230	80	642	10,400	92	838	5,980	107	755

	1914			1915			1916		
	Max.	Min.	Mean	Max.	Min.	Mean	Max.	Min.	Mean
January	5,230	274	1,470	2,480	285	781	1,300	158	396
February	2,240	473	1,000	1,240	376	719	4,620	335	1,660
March	2,480	551	1,130	1,110	407	632	5,670	460	1,800
April	2,480	520	1,030	1,640	218	576	1,740	851	1,190
May	541	256	407	1,730	182	610	1,630	858	1,120
June	853	274	414	655	267	388	1,100	602	841
July	260	100	152	865	221	337	2,480	265	674
August	102	72	86.5	215	92	133	300	137	198
September	841	72	307	115	74	86.8	296	129	165
October	2,120	281	607	1,420	112	419	542	94	126
November	3,320	355	903	7,920	435	1,970	4,720	232	1,050
December	970	188	366	8,830	515	1,520	1,480	308	810
For theYear	5,230	72	656	8,830	74	682	5,670	94	831

The foregoing is given as a matter of interest in connection with the problem of the future water supply of the City.

From an examination of the minimum monthly discharge during the dry weather period of the several years covered by the record, it is apparent that the question of storage will have to be considered before the maximum consumption reaches the capacity of the present conduits, or say 105 second feet. It is now thought probable that the first unit of such storage may be secured at Bull Run lake at comparatively small expense.

POPULATION SUPPLIED

The population of the City in 1910 was given by the United States census report as 207,214. Dwelling connections reported by the Water Bureau for that year number 41,195. This gives an average of 5.03 persons supplied for each residence service installed on that date.

Using "5" as a multiplier, the number of services in use November 30, 1916, being 52,593 (as stated in the Superintendent's Report), this gives a total population supplied as 262,965.

In this connection it is noted that the Federal estimate of the population of the larger cities of the country, as reported on December 21, 1916, gives Portland a present population of 295,463. This seems excessive, in view of the records of the Water Bureau as given above. But the difference may be accounted for by the number of persons residing within the City limits but now supplied with Bull Run water.

WATER CONSUMPTION

Total number of services listed as per Water Bureau ledgers	61,451
Number actually in use November 30, 1916	52,593
Vacancies, shut-offs and discontinued services	8,858
Meters installed, all sizes	16,986
Average number in actual use	16,273

Total consumption through 16,273 metered services, of all sizes, 3,045,000,000 gallons, or 8,318,900 gallons per day.

The following table shows the consumption in the several districts of the City.

WATER CONSUMPTION DATA, 1916
(November 30, 1915 to November 30, 1916)

Districts	Flats	Average Number Meters In Use	Total Consumption Thru Meters Per Day, In Gallons	Population Supplied By Meters	Average Gallons Per Day Per Capita Thru Meters	Total Average Consumption Per Day, in Gallons, as Shown By District Meters	Total Population Supplied	Average Gallons Per Day Per Capita: All Services For All Purposes
WEST SIDE								
Low Gravity	2,991	3,984	4,189,268	19,920	210.0	7,300,000	34,875	209.0
High Gravity	1,970	1,857	1,017,067	9,285	109.5	2,074,400	19,135	108.3
Pump, N. of Jefferson St	.....	268	90,022	1,340	67.2	188,500	1,340	140.6
Pump, S. of Jefferson St	64	260	38,696	1,300	29.8	187,500	1,620	115.7
Portland Heights	5	551	153,003	2,755	55.6	128,300	2,780	46.2
Council Crest	.....	79	15,516	395	39.3	30,600	395	77.5
*Burlingame Standpipe	5	80	38,342	400	95.8	51,800	425	121.8
EAST SIDE								
Low Gravity	5,700	1,455	980,918	7,275	134.8	2,640,000	35,775	73.8
Intermediate Gravity	6,824	3,567	843,901	17,835	47.3	3,020,000	51,955	58.1
*High Grav., S. of Division St.	4,915	888	177,233	4,440	39.9	1,421,500	29,015	48.9
*High Grav., N. of Division St	4,275	409	177,775	2,045	86.8	848,000	23,420	36.1
Vernon Standpipe	9,570	2,718	576,581	13,590	42.4	3,790,000	61,440	61.7
Pump, Tabor Heights	.....	157	20,619	785	26.3	64,400	785	82.0
Totals	36,319	16,273	8,318,941	81,365	102.2	21,745,000	262,969	82.7
Or, excluding West and East Side Low Gravity Services	8,691	5,439	5,170,186	27,195	190.0	9,940,000	70,650	140.7
Totals	27,628	10,834	3,148,755	54,170	58.1	11,805,000	192,310	61.4

*Burlingame Standpipe District includes "Multnomah" as one service.

*East Side High Gravity District, south of Division, includes "Milwaukie," "Ardenwald," "Section Line Road" as one service each.

*East Side High Gravity District, north of Division, includes "Russellville Water Co.," "Inglewood Park," etc., as one service each.

Comparing the daily consumption in the several districts of the City as recorded in the foregoing table, it is noted that the consumption through meters is appreciably greater in the East and West Side Low Gravity, or the East and West Side business districts, than in the other districts of the City. The daily per capita consumption in the East Side district being 134.8 gallons, and in the West Side district 210 gallons, the minimum record being shown for the Tabor Heights pump service—26.3 gallons per capita.

Attention is also called to the right-hand column of the table which shows the estimated per capita consumption, based upon the registration of the water passing through the large meters attached to the mains supplying individual districts, the average for the entire City being 82.7 gallons; while for the residence districts (excluding from the total registration that for the East and West Side Low Gravity districts) it is but 61.4 gallons, as compared with 64.1 gallons per capita for the year 1915. It may be noted that this includes water used for all legitimate purposes, including fire protection, street sprinkling and such leakage as may occur from pipe line joints, and is regarded as a favorable showing.

Diagram No. 1 has been prepared from the readings of the 30-inch meter attached to the main supplying the East Side Intermediate Gravity Service and shows the consumption during the days when the maximum and minimum flow occurred in that district. The minimum flow of 2,800,000 gallons was on August 9th; maximum temperature on that day 71 degrees, minimum 59 degrees. The maximum flow of 5,820,000 gallons was observed on August 26th; maximum temperature 87 degrees, minimum 63 degrees; the average daily consumption for the entire month being 4,156,600 gallons; total during the month, 128,855,000 gallons.

This diagram illustrates the effect of the "peak" load which occurs during the sprinkling hours in the afternoon of a warm day, the maximum rate of consumption at that time being double the average rate.

Practically the same condition is found to exist in other districts of the City, where the "peak" load is found to be in excess of the average consumption by from 50 to 100 per cent. It is this condition which limits the effectiveness of the water supply system in the higher elevations of the City during warm weather periods, the remedy therefor being the increased use of service meters and the extension of the hours when sprinkling may be permitted.

STATISTICS

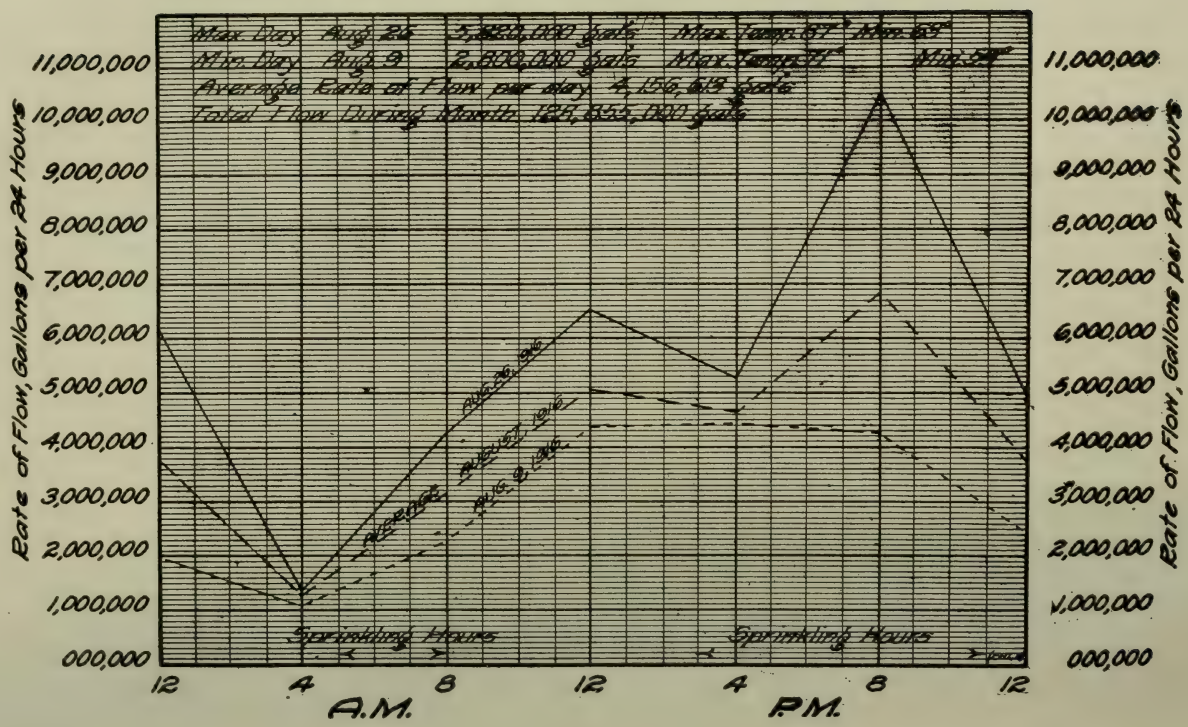
The accompanying tables show the water mains laid in the several districts of the City during the year and the total mileage now in use.

A summary has also been prepared for the year ending November 30, 1916, using therefor the form recommended by the New England Water Works Association for the compilation of data relating to Water Works maintenance and operation.

Respectfully submitted,

D. D. CLARK, Engineer.

WATER DEPARTMENT
PORTLAND, OREGON.
30" Meter, Reservoir No. 6
Rate of Water Consumption
MONTH OF AUGUST, 1916



SUMMARY OF WATER MAINS IN USE NOVEMBER 30, 1916

Size (Inches)	WEST SIDE			EAST SIDE			Total Miles
	C. I.	Steel or W. I.	Total Miles	C. I.	Steel or W. I.	Wood	
30	0.871	4.282	5.153	4.674	1.800		6.474
24	2.289	4.630	6.919	7.030	2.481		9.511
20	5.143	0.667	5.810	2.116	0.586		2.702
18	0.089	0.596	0.685		0.587		0.587
16	4.181		4.181	10.523			10.523
14	3.176		3.176	3.469			3.469
12	13.876	1.088	14.964	17.265		1.785	19.050
10	10.500	0.737	11.237	3.942		0.112	4.054
8	23.892	0.276	24.168	140.558			140.558
7						0.230	0.230
6	44.852	1.308	46.160	58.409		1.188	59.597
5						0.189	0.189
4	16.933		16.933	16.030	1.075	2.686	19.791
Totals, 4 inch and over	125.802	13.584	139.386	264.016	6.529	6.190	276.735
3½					0.052		0.052
3	0.567	0.514	1.081		2.878	2.532	5.410
2½		0.250	0.250		1.199	0.313	1.512
2		5.594	5.594		36.500	1.268	37.768
1½		0.311	0.311		26.888		26.888
1¼		0.151	0.151		8.379		8.379
1		0.899	0.899		7.169		7.169
¾		0.393	0.393		2.875		2.875
½		0.061	0.061		1.082		1.082
Totals under 4 inches	0.567	8.173	8.740		87.022	4.113	91.135
Totals, all sizes	126.369	21.757	148.126	264.016	93.551	10.303	367.870

SUMMARY OF WATER MAINS IN USE NOVEMBER 30, 1916—Continued

Size (Inches)	C. I.	Steel or W. I.	Wood	Total Miles	C. I.	Steel or W. I.	Wood	Total Miles
30	2.733			2.733	8.278	6.082		14.360
24	2.985			2.985	12.304	7.111		19.415
20	1.129			1.129	8.388	1.253		9.641
18					0.089	1.183		1.272
16	3.457			3.457	18.161			18.161
14	2.290			2.290	8.935			8.935
12	13.990	0.067		14.057	45.131	1.155	1.785	48.071
10	1.038	0.050		1.088	15.480	0.787	0.112	16.379
8	83.210	0.263	0.405	83.887	247.669	0.539	0.405	248.613
7							0.230	0.230
6	37.668	2.326	0.023	40.017	140.929	3.634	1.211	145.774
5							0.189	0.189
4	9.100	3.233	0.492	12.825	42.063	4.308	3.178	49.549
Totals, 4 inch and over	157.609	5.939	0.920	164.468	547.427	26.052	7.110	580.589
3½						0.052		0.052
3		0.794		0.794	0.567	4.186	2.532	7.285
2½			0.757	0.757		1.449	1.070	2.519
2		35.311	1.167	36.478		77.405	2.435	79.840
1½		3.321		3.321		30.520		30.520
1¼		1.086		1.086		9.616		9.616
1		14.449		14.449		22.517		22.517
¾		1.088		1.088		4.356		4.356
½		0.099		0.099		1.242		1.242
Totals under 4 inches		56.148	1.924	58.072	0.567	151.343	6.037	157.947
Totals, all sizes	157.609	62.087	2.844	222.540	547.994	177.395	13.147	738.536

BULL RUN CONDUITS

CONDUIT NO. 1—HEADWORKS TO MT. TABOR

	Miles
42-inch Steel (riveted)	10.022
35-inch Steel (riveted)	7.772
33-inch Steel (riveted)	6.505
Total	24.299

CONDUIT NO. 2—HEADWORKS TO MT. TABOR

	Miles
52-inch Steel (lock-bar)	10.018
44-inch Steel (lock bar)	14.742
Total	24.760

MT. TABOR TO CITY PARK

	Miles
24-inch Steel (submerged)	0.387
30-inch Steel (submerged)	0.387
Total submerged	0.774
32-inch Cast Iron (shore connections)	6.020
30-inch Cast Iron (shore connections)	0.437
Total shore connections	6.457
Grand total	56.290

SUMMARY OF STATISTICS FOR YEAR ENDING NOVEMBER 30, 1916—IN FORM RECOMMENDED BY NEW ENGLAND WATER WORKS ASSOCIATION

MUNICIPAL WATER WORKS

City of Portland, Multnomah County Sate of Oregon.

GENERAL STATISTICS

Population by census of 1910, 207,214.
Date of construction, 1893-4; additions in 1910-11.
By whom owned: The City of Portland.
Source of supply: Bull Run River.
Mode of supply: Gravity and pumping.

PUMPING STATISTICS

1. Builders of pumping machinery:
   2 Reidler pumps, Fraser & Chalmers, Chicago Ill.
      (1-1,000,000 gallons capacity per 24 hours)
      (1- 500,000 gallons capacity per 24 hours)
   3 Gould pumps, Gould Manufacturing Co., Seneca Falls, N. Y.
      (1- 540,000 gallons capacity per 24 hours)
      (1- 220,000 gallons capacity per 24 hours)
      (1- 250,000 gallons capacity per 24 hours)
   1 Smith & Vaile, Platt Iron Works, Dayton, Ohio.
      (1- 375,000 gallons capacity per 24 hours)
   2 4-Stage Alberger Turbine pumps, New York.
      (2- 108,000 gallons capacity per 24 hours)
   In reserve:
   2 Dean pumps, Holyoke, Mass.
      (2- 108,000 gallons capacity per 24 hours)
   3 Holly-Gaskell compound pumps, Holly Mfg. Co., Lockport, N. Y.
      (1-10,000,000 gallons capacity per 24 hours)
      (1- 2,500,000 gallons capacity per 24 hours)
      (1- 500,000 gallons capacity per 24 hours)

2 Worthington pumps, Henry R. Worthington, N. Y.
(2- 5,000,000 gallons capacity per 24 hours)

2. Description of fuel used:
   a. Kind: Wood and electricity.
   b. Brand of coal: Pelton wheel and electric motor for operating plants; cordwood for reserve plants.
   c. Average price of coal per gross ton, delivered, $.....
   d. Perecentage of ash, ...
   e. Wood: Price per cord, $.....
3. Coal consumed for the year, ...pounds.
4. (Pounds of wood consumed) Divided by 3 = equivalent amount of coal, ... pounds.
5. Total equivalent coal consumed for the year (3)—(4) .....lbs.
6. Total pumpage for the year: 249,000,000 gallons.
7. Average static head against which pumps work, 175 to 585 feet.
8. Average dynamic head against which pumps work: 150 to 570 feet.
9. Number of gallons pumped per pound of equivalent coal (5).....
10. Duty—gallons pumped (6) x 8.34 (pounds) x 100 x dynamic head (8) .....; total fuel consumed (5); cost of pumping, figured on pumping station expense, $.....
11. Per million gallons pumped, $.....
12. Per million gallons rained one foot (dynamic), $.....

FINANCIAL STATISTICS

Receipts

Balance brought forward	$	109,910.32
(a) From ordinary (maintenance) receipts		
(b) From extraordinary receipts (bonds, etc.)		
Total	$	109,910.32
From Water Rates:		
A. Fixture rate	$	339,601.95
B. Meter rates		402,643.30
C. Total from consumers		742.245.25
D. For hydrants		
E. For fountains		
F. For street watering		
G. For public buildings		
H. For miscellaneous use		11,930.85
I. General appropriation		
J. Total from municipal departments		
K. From tax levy		
L. From bond issues		124,071.25
M. From other sources		9,839.25
N. Total	$	997,996.92

Expenditures

Water Works Maintenance:		
AA. Operation (management and repairs)	$	200,963.89
BB. Special		
CC. Total maintenance		200,963.89
DD. Interest on bonds		326,510.00
(CC and DD)		
EE. Payment on bonds		
FF. Sinking fund		146,380.00
Water Works Construction:		
GG. Extension of mains, etc.		80,595.39
HH. Extension of service. (This amount taken out of amounts received for tapping and service installations)		
II. Extension of meters		14,978.81

JJ.	Special: Tools, equipment and stock material	4,269.26
	Office and other buildings	
	Water works property purchased	108,049.00
	Improvement of real property	1,582.67
	Reservoir No. 5	
	Reservoir No. 6	
	Lowering submerged pipes Nos. 1 and 2	
	Clearing and roads	
	Bull Run Conduit No. 2	32.60
	New Headworks	1,135.61
	Surveys and explorations	6,227.58
	Improvement Bond Sinking Fund (purchase of mains laid under assessment plan)	
	Sandy River dwelling	2,091.31
	Refund of meter deposits	1,450.25
KK.	Total construction	
LL.	Unclassified expenses	
MM.	Balance (aa) ordinary	
	(bb) extraordinary	
	Net balance	103,730.55
N.	Total	$ 997,996.92

Disposition of Balance:

O.	Net cost of works to date	$12,410,908.87
P.	Bonded debt at date	7,319,000.00
J.	Payments into Sinking Fund to date	1,029,220.00
R.	Average rate of interest	4%, 5% and 6%

SUMMARY OF STATISTICS RELATING TO DISTRIBUTION SYSTEM

Mains

1.	Kind of pipe: Cast Iron and Steel, Wrought Iron and Wood.	
2.	Sizes: From 1 inch to 30 inches.	
3.	Extended—	
	4 inches and over in diameter, miles	14.765
	Under 4 inches in diameter, miles	29.113
	Total, miles	43.878
4.	Discontinued, miles	4.693
5.	Total now in use, miles	738.536
6.	Cost of repairs per mile	$.....
7.	Number of leaks per mile	
8.	Length of pipes less than 4 inches in diameter, miles	157.947
9.	Number of hydrants added during the year (public and private)	112
	Number added on mains owned by city	112
	Number added on mains laid by private parties under city supervision, not yet taken over by city	0
	Total	112
10.	Number of hydrants (public and private) now in use (2 removed)	5,138
11.	Number of stop-gates added during the year	433
	Number added on mains owned by the city	433
	Number added on mains laid by private parties under city supervision, not yet taken over by city	0
	Total	433
12.	Number of stop gates now in use	7,319
13.	Number of stop gates, smaller than 4 inches in diameter	913
14.	Number of blow-offs	293
15.	Range of pressure on mains: 20 to 80 pounds.	

Services

16.	Kind of pipe: Galvanized iron.	
17.	Sizes: ½ in., ¾ in. 1 in. 1¼ in., 1½ in. 2 in.	
18.	Extended, feet	
19.	Discontinued, feet	
20.	Total now in use, miles	
21.	Number of service taps added during the year	849
22.	Number now in use	52,593
23.	Average length of service, feet	18
24.	Average cost of service for the year	$.....
25.	Number of meters added	1,491

26.	Total in use	16,986
	Average number in actual use	16,273
27.	Percentage of all services meter	32.2%
28.	Percentage of receipts from metered water (B÷C)	54.25%
29.	Number of motors and elevators added	
30.	Number now in use	

STATISTICS OF CONSUMPTION OF WATER

1.	Estimated total population to date	280,000
2.	Estimated population on lines of pipe	262,965
3.	Estimated population supplied	262,965
4.	Total consumption for the year, gallons	7,959,000,000
5.	Total passed through meters, gallons	3,045,000,000
6.	Percentage of consumption metered	37.4%
7.	Average daily consumption, gallons	21,745,000
8.	Gallons per day to each inhabitant	77.7
9.	Gallons per day to each consumer	82.7
10.	Gallons per day to each tap	413.5
11.	Cost of supplying water per million gallons, figured on total maintenance (Item CC)	$25.25
12.	Total cost of supplying water per million gallons, figured on total maintenance, plus interest on bonds	$63.95

PIPE EXTENSIONS COMPLETED DURING THE FISCAL YEAR ENDING NOVEMBER 30, 1916

West Side

		Size (Inches)	Length (Feet)
June	Ford Street, Main to Madison Streets	6	286
July	Summit Drive, Talbot Road to alley between Blks. "A" and "G," Greenway	6	538
	Alley between Blks. "A" and "G", Greenway, Summit Drive to Talbot Road	6	150
August	Harrison Streets, 14th to 16th Streets	6	571
	Hydrant connections	6	6
	14th Street, Harrison Street to Hall Street	6	258
	Hydrant connections	6	6
	Total		1,815
	Hydrant connections included in above total		12

Summary

Total length 6 inch pipe..... 0.341 Miles.

PIPE EXTENSIONS LESS THAN 4 INCHES DIAMETER COMPLETED DURING THE FISCAL YEAR ENDING NOVEMBER 30, 1916

West Side

		Size (Inches)	Length (Feet)
July	Summit Drive, alley between Block "A" and "G," Greenway, to end of street	2	299

Summary

2-inch..... 0.057 Miles.

PIPE ACQUIRED BY BILL-OF-SALE DURING THE FISCAL YEAR ENDING NOVEMBER 30, 1916

West Side

		Kind	Size (Inches)	Length (Feet)
Dec., 1915	Addison Ave., St. Helens Road to Willbridge Ave.	W. I.	1¼	254
	Willbridge Ave., Addison Ave. to 279 feet north	W. I.	1	279
April, 1916	Alley between Lots 34 and 35, Blythwood Add., Aspen St. to Gordon Ave	W. I.	2	213
	Gordon Ave., alley between Lots 34 and 35, Blythwood Add. to Alexandria	W. I.	2	134
	Alexandria, Gordon Ave. to 391 feet north	W. I.	2	391
	Total			1,271

Summary

Size	Length. Length
1 -inch	0.053 Miles.
1¼-inch	0.048 Miles.
2 -inch	0.140 Miles.
Total	0.241 Miles.

PIPE EXTENSION COMPLETED DURING THE FISCAL YEAR ENDING NOVEMBER 30, 1916

East Side

		Size (Inches)	Length (Feet)
March	E. 30th St., Holgate St. to Gladstone Ave	8	1,095
	Hydrant connections	6	12
	69th St., S. E., 18-ft. N. S. L. 55th Ave. to 6-ft. N. N. L. 55th Ave	6	48
	Hydrant connections	6	6
April	E. Salmon St., E. 30th to E. 35th Sts	12	1,668
	Hydrant connections	6	6
	E. Main St., E. 40th to E. 41st Sts	6	337
May	Hawthorne Ave., 14-ft. W. E. L. to 8-ft. E. E. L. E. 76th	8	23
	Hydrant connections	6	6
	E. 76th St., 14-ft. N. S. L. to 28-ft. N.S.L. Hawthorne Ave.	12	14
	E. Madison St., 18-ft. W. E. L. to 8-ft. E. E. L. E. 76th	6	26
	Hydrant connections	6	6
	E. 76th St., 18-ft. N. S. L. to 28-ft. N. S. L. E. Madison St.	12	10
	E. Clay St., 8-ft. W. E. L. to 8-ft. E. E. L. E. 76th St	12	16
	Hydrant connections	6	6
	E. Main St., E. 41st St. to W. L. Glencoe Park	6	573
	Intersection branch on E. 43rd St	6	19
	Hydrant connections	6	6
	E. Glisan St., E. 24th to E. 26th Sts	6	550
	Hydrant connections	6	6
	Brooklyn St., E. 10th St. to Milwaukie St	6	367
	Intersection branch on E. 11th St	6	29
	100th St., S. E., 65th Ave., S. E. to 192-ft. N. N. L. of 67th Ave., S. E	8	235
	65th Ave., S. E., 97th St., S. E., to 100th St., S. E	8	622
	97th St., S. E., 22-ft. N. S. L., 65th Ave., to 29-ft. N. N. L.	8	67
June	E. 61st St., E. Burnside St. to 375-ft. S. S. L. of E. Ankeny St	6	721
	Intersection branch on E. Ankeny St	4	18
	Hydrant connections	6	6
	E. 27th St., 17-ft. N. S. L. Buxton St. to 54-ft. S. S. L.	6	71
	E. Salmon St., E. 76th to E. 80th Sts	6	980
	Hydrant connections	6	12
July	Weidler St., Williams Ave. to E. 1st St	8	502
	Tenino Ave., E. 17th to E. 19th Sts	8	526
	E. 13th St., E. 14th St. to Malden Ave	8	1,648
	Intersection branch on Rural Ave	6	22
	Intersection branch on Knapp Ave	4	44
	Intersection branch on Flavel Ave	4	44
	Intersection branch on Rex Ave	4	44
	Hydrant connections	6	12
	Wheeler St., 18-ft. N. S. L. to 12-ft. N. N. L. Broadway St.	8	64
	Broadway, Larrabee St. to Union Ave	8	2,611
	Intersection branch on E. 3rd St. looks north	6	49
	Intersection branch on E. 2nd St., looks north	6	42
	Intersection branch on Victoria St., looks south	6	20
	Intersection branch on Vancouver Ave., looks north and south	6	74
	Intersection branch on Wheeler St., looks south	8	20
	Hydrant connections	6	48
	Williams Ave., Cherry St. to 88-ft. N. N. L. Weidler St.	6	291
	Intersection branch on Weidler St., looks east and west	8	65
	Hydrant connections	6	6
	97th St., S. E., Foster Road to 21-ft. N. S. L. 64th Ave.	8	779
	Hydrant connections	6	6
	97th St., S. E., 21-ft. N. S. L. 64th Ave. to 11-ft. N. S. L. 65th Ave., looks west	12	60
	Hydrant connections	6	6
	97th St., S. E., 11-ft. N. S. L. 65th Ave. to 27-ft. N. N. L. 65th Ave., looks west	8	129
	Hassalo St., E. 69th St. to E. 72nd St	8	935
	Intersection branch on E. 69th St., looks south	8	11
	Intersection branch on E. 70th St., looks north	8	39
	Hydrant connections	6	6

PIPE EXTENSION COMPLETED DURING THE FISCAL YEAR ENDING NOVEMBER 30, 1916—Continued

		Size (Inches)	Length (Feet)
September	Rural Ave., E. 13th to E. 14th Sts	6	209
	Lavern St., Crampton St. to 30-ft. S. S. L. Crampton St	4	53
	E. 22nd St., 17-ft. N. S. L. Powell St. to 6-ft. S.S.L. Powell	4	23
	E. 32nd St., E. Stark St. to E. Ankeny	8	1,026
	Intersection branch on E. Ankeny St	8	37
	Hydrant connections	6	12
	E. 31st St., E. Stark to E. Pine Sts	8	485
	Hydrant connections	6	12
October	Halsey St., Union Ave. to E. 6th St	8	522
	Hydrant connections	6	12
	E. Caruthers St., E. 30th St. to Kenilworth Ave	6	457
	Hydrant connections	6	6
	Total		18,518
	Hydrant connections included in above total		198

Summary

4-inch pipe	0.043 miles.
6-inch pipe	0.925 miles.
8-inch pipe	2.167 miles.
12-inch pipe	0.335 miles.
Total	3.470 miles.

PIPE EXTENSIONS LESS THAN 4 INCHES IN DIAMETER COMPLETED DURING THE FISCAL YEAR ENDING NOVEMBER 30, 1916

East Side

		Size (Inches)	Length (Feet)
February	42nd Ave., S. E., 67th to 72nd Sts	2	1,325
March	59th Ave., S. E., 50th to 52nd Sts	2	593
	69th St., S. E., 6-ft. N. N. L. 55th Ave. to 175-ft. N. N. L. of 55th Ave	2	169
May	97th St., S. E., 65th to 67th Aves., S. E	2	563
	100th St., S. E., 192-ft. N. N. L. 67th Ave. to 32-ft. S. N. L. of 67th Ave	2	224
	67th Ave., S. E., 17-ft. W. E. L. 100th St., S. E. to 44-ft. W. E. L. of 100th St., S. E	2	27
	100th St., S. E., 22-ft. N. S. L. 65th Ave. to 13-ft. S. S. L. of 64th Ave., S. E	2	273
July	Wheeler St., E. Broadway to 221-ft. north	2	244
	60th St., S. E., 63rd to 65th Aves	2	590
	Long Ave., E. 28th St. to Kenilworth Ave	2	326
	E. 32nd St., Francis Ave. to 400-ft. north	2	440
August	E. 73rd St., E. Stark to E. Alder Sts	2	405
	Intersection branch on E. Alder St	2	32
September	Sullivan St., E. 28th to E. 29th Sts	2	410
	Lavern St., 30-ft. S. S. L. to 217-ft. S. S. L. Crampton St	2	187
	E. 22nd St., Powell to Bismark Sts	2	1,223
	Bismark St., 17-ft. W. E. L. E. 22nd to 30-ft. W. W. L. E. 22nd St	2	73
	Mall St., E. 42nd to 465-ft. west	2	510
	Halsey St., E. 70th to E. 71st Sts	2	111
	Intersection branch on E. 70th St	2	28
	58th St., S. E., 258-ft. N. N. L. 27th Ave. to 650-ft. S. S. L. 27th Ave	2	958
	Total		8,711

Summary

2-inch pipe	1.650 miles.

PIPE ACQUIRED BY BILL-OF-SALE DURING THE FISCAL YEAR ENDING NOVEMBER 30, 1916

East Side

		Kind	Size (Inches)	Length (Feet)
Dec., 1915	E. 67th St., Failing to N. L. Hyde Park Addn.	W. I.	2	290
	Shaver St., E. 63rd St. to E. L. Hyde Park Addn.	W. I.	2	201
	E. 72nd St., Beech to Failing Sts.	W. I.	2	767
March, 1916	Edwards St., Van Houten St. to Berkeley St.	W. I.	1	613
	Berkeley St., Edwards to Cecelia Sts.	W. I.	¾	454
April	E. 76th St., Division St. to 700-ft. north	W. I.	2	700
June	E. 20th St., E. Ash to E. Pine	W. I.	1	263
	E. Pine St., E. 20th St. to 75-ft. west	W. I.	1	118
	E. Stark St., E. 91st St. to E. 92nd St.	W. I.	1½	355
	Total			3,761

Summary

¾-inch pipe	0.086 miles.
1 -inch pipe	0.188 miles.
1½-inch pipe	0.067 miles.
2 -inch pipe	0.371 miles.
Total	0.712 miles.

PIPE ACQUIRED BY PURCHASE DURING THE FISCAL YEAR ENDING NOVEMBER 30, 1916

East Side

	Size (Inches)	Kind	Length (Feet)	Total Cost
E. Main St., E. 24th St. to 210-ft. east	6	C.I.	210	
Total length 6-inch pipe			210	$ 173.25

Summary

Size	Kind	Length (Feet)	Length (Miles)	Total Cost
6-inch pipe	C. I.	210	0.040	$ 173.25

PIPE EXTENSION COMPLETED DURING THE FISCAL YEAR ENDING NOVEMBER 30, 1916

Albina

		Size (Inches)	Length (Feet)
February	DePauw St., 20-ft. E. W. L. to 13-ft. E. E. L. Portsmouth Ave	6	73
April	E. 16th St., Hancock to Tillamook Sts	8	322
	Hydrant connections	6	6
May	Willamette Blvd., 46-ft. W. E. L. to 74-ft. W. E. L. Carey Blvd	12	28
	Willamette Blvd., 30-ft. W. W. L. to 208-ft. E. E. L. Alma St.	12	300
	Hydrant connections	6	12
	Willamette Blvd., across S. P. & S. Ry. Bridge (Steel)	12	356
June	Morse St., Durham to Dekum Aves	6	831
	Hydrant connections	6	12
	Ainsworth Ave., E. 9th to E. 10th Sts	8	332
	Intersection branch on E. 9th St	8	74
July	E. 33rd St., Hancock to Knott Sts	8	2,067
	Hydrant connections	6	12
	E. 18th St., Alberta St. to Killingsworth Ave	8	1,280
	Intersection branch on Killingsworth Ave	12	72
	Hydrant connections	6	18
August	E. 27th St., Fremont St. to 390-ft. south	8	390
	Hydrant connections	6	6
	Blandena St., Erwin St. to Patton Ave	6	349
	Hydrant connections	6	6
September	E. 25th St., Killingsworth Ave. to Alberta St	8	1,323
	Hydrant connections	6	18
	McKenna Ave., Willamette Blvd. to McCosh St	8	830
	Hydrant connections	6	6
	East 26th St., Killingsworth Ave. to Alberta St	8	1,319
	Hydrant connections	6	18
	Killingsworth Ave., Omaha Ave., to Gay St	12	246
	Ainsworth Ave., Omaha Ave. to Gay St	8	245
	Hydrant connections	6	6
	Gay St., 18-ft. N. S. L. to 6-ft. N. N. L. Killingsworth Ave.	6	48
	Hydrant connections	6	6
October	E. 21st St., 18-ft. S. N. L. to 12-ft. S. S. L. Prescott St	6	49
	Hydrant connections	6	6
	Total		10,666
	Hydrant connections included in above total		132

Summary

6-inch pipe	0.256 miles.
8-inch pipe	1.550 miles.
12-inch pipe	0.190 miles.
Total	1.996 miles.

PIPE EXTENSION LESS THAN 4 INCHES IN DIAMETER COMPLETED DURING THE FISCAL YEAR ENDING NOVEMBER 30, 1916

Albina

		Size (Inches)	Length (Feet)
March	Courtenay St., Willis Blvd. to Girard St	2	521
	Girard St., Courtenay to Haven Sts	2	174
	Minnesota Ave., Fremont to Revere Sts	2	331
	Stafford St., Rodney Ave. to 257-ft. E. E. L. Rodney Ave.	2	273
	Simpson St., Campbell St. to 212-ft. east	2	229
July	E. 69th St., Siskiyou St. to 360-ft. north	2	410
	Michigan Ave., Portland Blvd. to Dekum Ave	2	696
August	Princeton St., Macrum St. to 274-ft. east	2	292
September	Killingsworth Ave., E. 25th St. looking south to E. 25th St., looking north	2	155
	Killingsworth Ave., E. 25th St. looking south to E. 25th St., looking north	2	170
	Gay St., Ainsworth Ave. to Killingsworth Ave	2	1,278
	Total		4,529

Summary

2-inch pipe ..... 0.858 miles.

PIPE ACQUIRED BY BILL OF SALE DURING THE FISCAL YEAR ENDING NOVEMBER 30, 1916

Albina

		Kind	Size (Inches	Length (Feet)
July	Buffalo St., 77-ft. W. W. L. to 250-ft. E. E. L. Commercial St	W. I.	2	377
	Buffalo St., 77-ft. W. W. L. to 133-ft. W. W. L. Commercial St	W. I.	1½	56
	Buffalo St., 250-ft. E. E. L. Commercial St. to 111-ft. W. E. L. of Vancouver	W. I.	1½	186
	Morgan St., 23-ft. W. W. L. Commercial St. to 15-ft. W. E. L. of Haight St	W. I.	2	308
	Morgan St., 23-ft. W. W. L. Commercial St. to 85-ft. W. W. L. Commercial St	W. I.	1½	63
	Commercial St., Buffalo St. to Bryant St	W. I.	2	647
	Haight St., Morgan St. to 163-ft. S. S. L. Morgan St	W. I.	2	178
	Haight St., 163-ft. S. S. L. to 285-ft. S. S. L. Morgan St	W. I.	1½	122
	Haight St., 285-ft. S. S. L. to 305-ft. S. S. L. Morgan St	W. I.	1	305
	Total			2,242

Summary

1 -inch pipe ..... 0.058 miles.
1½-inch pipe ..... 0.081 miles.
2 -inch pipe ..... 0.286 miles

Total ..... 0.425 miles.

PIPE ACQUIRED BY PURCHASE DURING THE FISCAL YEAR ENDING NOVEMBER 30, 1916—(St. Johns Water System)

Albina

	Size (Inches)	Kind	Length (Feet)
County Road, Oswego to Buchanan St	2	W. I.	1,678
Reno St., Edison to Ivanhoe Streets	1	W. I.	780
St. Johns Ave., Kellogg St., look N. to Kellogg St. look S	2	Wood	115
St. Johns Ave., Leonard St. to Chapel St	2	W. I.	560
Catlin St., Decatur to Edison Sts	1	W. I.	240
Catlin St., Edison St. to E. L. Willamette Blvd	2	W. I.	280
Catlin St., 20 ft. E. E. L. Willamette Blvd. to Hayes St	2	Wood	200
Catlin St., E. L. Hayes St. to Jersey St	2	Wood	500
Bristol St., 120 ft. E. E. L. Central Ave. to 150 ft. W. W. L. of Seneca St	1	W. I.	860
Bristol St., 150 ft. W. W. L. of Seneca St. to 182 ft. E. E. L. Seneca	2	W. I.	390
Swenson St., 70 ft. E. E. L. Johnson to Todd Sts	2	W. I.	145
Swenson St., Todd St. to Cruikshank St	1	W. I.	185
Swenson St., Cruikshank St. to E. L. Barr St	1	W. I.	80
Swenson St., E. L. Barr St. to 100 ft. E. E. L. Charleston St	2	W. I.	723
Trumbull St., 65 ft. E. E. L. Edison St. to 60 ft. E. E. L. Willamette Blvd	1	W. I.	255
Hartman St., Central Ave. to 20 ft. W. W. L. Chapel St	2	W. I.	253
Hartman St., 205 ft. W. W. L. Seneca St. to 250 ft. E. E. L. Seneca	2	W. I.	515
Hartman St., Myers St. to Cruikshank St	6	C. I.	555
Hartman St., Cruikshank St., looking East	2	W. I.	45
Hartman St., 25 ft. E. E. L. Cruikshank St. to 180 ft. W. W. L. Charleston St	1	W. I.	280
Hartman St., 180 ft. W. W. L. Charleston St. to Oswego St	2	W. I.	720
Nicklin St., Myers St. to 90 ft. E. E. L. Cruikshank St	1	W. I.	545
Nicklin St., 90 ft. E. E. L. Cruikshank St. to 120 ft. W. W. L. of Charleston St	2	W. I.	155
Richards St., Midway Ave. to 225 ft. W. W. L. Midway Ave	2	W. I.	245
Armour St., 125 ft. W. W. L. Midway Ave. to 115 ft. E. E. L. Midway	2	W. I.	300
Armour St., Oregonian Ave. to 280 ft. W. W. L. Oregonian Ave.	1½	W. I.	320
Swift St., Midway Ave. to 225 ft. E. E. L. Midway Ave	2	W. I.	265
Swift St., 185 ft. W. W. L. Oregonian Ave. to 150 ft. E. E. L. Oregonian Ave	1½	W. I.	405
Swift St., Macrum Ave. to 300 ft. E. E. L. of Macrum Ave	1	W. I.	360
Bank St., Buchanan St. to Newton St	2	W. I.	240
Bank St., Barr St. to E. L. Oregonian Ave	2	W. I.	1,205
Bank St., E. L. Oregonian Ave. to 125 ft. W. W. L. Macrum Av	1½	W. I.	325
Bank St., 125 ft. W. W. L. Macrum Ave. to 100 ft. E. E. L. Macrum	2	W. I.	305
Bank St., 100 ft. E. E. L. Macrum Ave. to 125 ft. W. W. L. Taft Ave	1	W. I.	225
Astor St., Midway Ave. to Macrum Ave	2	W. I.	1,130
Astor St., Macrum Ave. to 85 ft. W. W. L. Taft Ave	1½	W. I.	405
Astor St., 85 ft. W. W. L. Taft Ave. to Taft Ave	1	W. I.	125
Olympia St., 25 ft. E. E. L. Charleston St. to Oswego St	1	W. I.	455
Olympia St., Newton St. to Barr St	1	W. I.	260
Olympia St., 315 ft. W. W. L. Midway Ave. to 110 ft. E. E. L. Midway Ave	2	W. I.	485
Olympia St., 110 ft. E. E. L. Midway Ave. to Oregonian Ave	1	W. I.	460
Olympia St., Oregonian Ave. to 75 ft. E. E. L. Oregonian Ave	2	W. I.	125
Olympia St., 75 ft. E. E. L. Oregonian Ave. to 25 ft. E. E. L. Macrum Ave	1½	W. I.	480
Olympia St., 25 ft. E. E. L. Macrum Ave. to W. L. Taft Ave	1	W. I.	425
Fox St., Myers St. to 185 ft. E. E. L. Myers St	2	W. I.	225
Fox St., Cruikshank St. to Charleston St	1	W. I.	300
Fox St., Charleston St. to 135 ft. W. W. L. of Oswego St	2	W. I.	345
Fox St., 135 ft. W. W. L. Oswego St. to Oswego St	1	W. I.	155
Mears St., 285 ft. W. W. L. Oregonian to Macrum Aves	1	W. I.	825
Mears St., Macrum Ave. to 205 ft. W. W. L. and S. to S. L. Mears	2	W. I.	285
Powers St., Midway to Macrum Aves	4	C. I.	1,240
Fessenden St., 105 ft. W. W. L. Hayes St. to Hayes St	1	W. I.	125
Fessenden St., Hayes St. to E. L. Ivanhoe St	2	W. I.	70
Fessenden St., Hayes St. to E. L. Ivanhoe St	2	Wood	230

PIPE ACQUIRED BY PURCHASE DURING THE FISCAL YEAR ENDING NOVEMBER 30, 1916—(St. Johns Water System)—Continued

	Size (Inches)	Kind	Length (Feet)
Fessenden St., E. L. Ivanhoe St. to 135 ft. E. E. L. Ivanhoe St.	1	W. I.	135
Fessenden St., Jersey St. to Oswego St.	6	C. I.	3,447
Fessenden St., Oswego St. to Mohawk Sts.	1	W. I.	260
New York St., Bradford to Crawford Sts.	1	W. I.	240
New York St., 70 ft. W. W. L. Willamette Blvd. to W. L. Willamette Blvd.	1	W. I.	70
New York St., Willamette Blvd. to Hayes St.	1	W. I.	235
New York St., Ivanhoe St. to Jersey St.	1	W. I.	240
New York St., 20 ft. E. W. L. Jersey St. to E. L. Jersey St.	2	W. I.	40
New York St., E. L. Jersey St. to 416 ft. E. E. L. Jersey St.	1	W. I.	416
New York St., Smith Ave. to 200 ft. N. N. L. Smith Ave.	2	W. I.	220
Chicago St., Hayes St. to 60 ft. W. W. L. Ivanhoe St.	1	W. I.	180
Chicago St., Leonard St. to 520 ft. E. E. L. of Central Ave.	1	W. I.	753
Chicago St., 520 ft. E. E. L. Central Ave. to Smith Ave.	2	W. I.	297
Chicago St., Smith Ave. to 210 ft. N. N. L. Smith Ave.	1	W. I.	230
Baltimore St., Bradford St. to Crawford St.	6	C. I.	240
Baltimore St., Bradford St. to 120 ft. E. E. L. Bradford St.	1	W. I.	135
Baltimore St., Crawford St. to Hayes St.	4	C. I.	1,040
Alta St., E. L. Bradford St. to Crawford Sts.	1	W. I.	220
Alta St., E. L. Decatur St. to Willamette Blvd.	1	W. I.	445
Alta St., 15 ft. W. W. L. Willamette Blvd. to 20 ft. E. W. L. Willamette Blvd.	4	C. I.	35
Alta St., Hayes St. to 40 ft. W. W. L. Ivanhoe St.	4	Wood	200
Alta St., Ivanhoe St. to 30 ft. East	4	C. I.	30
Alta St., Ivanhoe St. to Jersey St.	6	C. I.	210
Philadelphia St., 20 ft. E. E. L. Decatur St. to Hayes St.	2	W. I.	720
Philadelphia, Hayes St. to 40 ft. W. W. L. Ivanhoe St.	1	W. I.	200
Pittsburgh St., W. L. Albany St. to E. L. Albany St.	2	W. I.	60
Pittsburgh St., E. L. Albany St. to Bradford St.	6	C. I.	370
Pittsburgh St., Albany to Bradford Sts.	1	W. I.	410
Pittsburgh St., 20 ft. E. E. L. Decatur St. to Edison St.	1	W. I.	200
Salem St., Bradford St. to Burlington St.	1	W. I.	720
Myers St., W. L. Bristol St. to Hartman St., L. N.	2	W. I.	460
Myers St., Hartman St. to Fessenden St.	6	C. I.	575
Nashton St., Midway Ave. to Columbia Blvd.	2	W. I.	490
Nashton St., Columbia Blvd. to 90 ft. E. E. L. Columbia Blvd.	1	W. I.	160
Seneca St., 265 ft. W. W. L. Bristol St. to 20 ft. W. E. L. Bristol St	1	W. I.	305
Seneca St., Bristol St. to Fessenden St.	2	W. I.	961
Seneca St., E. L. Oswego St. to W. L. Mohawk St.	1	W. I.	200
Seneca St., Tyler St. to 30 ft. W. W. L. Polk St.	2	W. I.	210
Seneca St., 30 ft. W. W. L. Polk St. to 20 ft. E. W. L. Polk St.	1	W. I.	50
Seneca St., 40 ft. E. E. L. Alma St. to Midway Ave.	1	W. I.	180
Seneca St., Columbia Blvd. to 130 ft. E. E. L. Ida St.	1	W. I.	300
Seneca St., Gilbert St. to Minerva St.	2	W. I.	235
Seneca St., Minerva St. to 175 ft. E. E. L. Minerva St.	1	W. I.	195
Smith Ave., 283 ft. W. W. L. St. Johns Ave. to St. Johns Ave.	2	W. I.	333
Smith Ave., St. Johns Ave. to 70 ft. W. W. L. Bristol St.	1	W. I.	350
Smith Ave., 70 ft. W. W. L. Bristol St. to Fessenden St.	2	Wood	280
Smith Ave., 70 ft. W. W. L. Bristol St. to Fessenden St.	2	W. I.	793
Smith Ave., Fessenden St. to Richmond St.	2	Wood	200
Smith Ave., Fessenden St. to Richmond St.	2	W. I.	1,223
Smith Ave., Oswego St. to Columbia Blvd.	6	C. I.	2,360
Chapel St., 113 ft. E. E. L. Reno St. to St. Johns Ave.	2	W. I.	490
Chapel St., 60 ft. E. E. L. Hartman St. to Fessenden St.	1	W. I.	380
Hudson St., St. Johns St. to 210 ft. E. E. L. John St.	1	W. I.	230
Hudson St., E. L. Oswego St. to Tiogo St.	1½	W. I.	1,240
Hudson St., W. L. Tiogo St. to Buchanan St.	1	W. I.	300
Scott Ave., John St. to 30 ft. W. W. L. Charleston St.	1	W. I.	260
Central Ave., 35 ft. E. E. L. Bruce Ave. to Fessenden St.	2	W. I.	3,223
30 ft. N. of Central Ave., Fessenden St. to 10 ft. W. W. L. Chicago	1	W. I.	588
Central Ave., Chicago St. to Leavitt St.	1	W. I.	296
Central Ave., John St. to Richmond St.	1½	W. I.	570
Leonard St., 160 ft. E. E. L. Weyerhauser to St. Johns Ave.	2	W. I.	1,050
Leonard St., 315 ft. W. W. L. St. Johns Ave. to St. Johns Ave.	1	W. I.	355

PIPE ACQUIRED BY PURCHASE DURING THE FISCAL YEAR ENDING NOVEMBER 30, 1916—(St. Johns Water System)—Continued

	Size (Inches)	Kind	Length (Feet)
Leonard St., St. Johns Ave. to 90 ft. W. W. L. Catlin St.	1	W. I.	597
Leonard St., 60 ft. E. E. L. Catlin St. to W. L. Fessenden St.	1.5	W. I.	610
Leonard St., 110 ft. E. E. L. New York St. to Chicago St.	1	W. I.	210
Leonard St., 140 ft. W. W. L. Burlington St. to Burlington St.	1	W. I.	180
Leonard St., Burlington St. to John St.	4	C. I.	500
Leonard St., John St. to Charleston St.	1	W. I.	280
Kellogg St., 120 ft. E. E. L. Bruce Ave. to 50 ft. W.W.L. Reno St	1	W. I.	994
Kellogg St., 50 ft. W. W. L. Reno to Fessenden St.	2	W. I.	2,154
Kellogg St., New York St. to 20 ft. W. W. L. Chicago St.	1	W. I.	320
Jersey St., 207 ft. W. W. L. Reno St. to 50 ft. W. W. L. St. Johns Ave.	2	W. I.	757
Jersey St., 50 ft. W. W. L. St. Johns Ave. to St. Johns Ave.	1	W. I.	120
Jersey St., St. Johns St. to Catlin St.	2	Wood	640
Jersey St., Catlin St. to Burr St.	6	C. I.	5,500
Jersey St., Burr St. to Alma St.	2	W. I.	460
Jersey St., Alma St. to W. L. Ida St.	1	W. I.	424
Ivannoe St., 55 ft. E. E. L. Weyerhauser St. to Fessenden St.	2	Wood	860
Ivanhoe St., 55 ft. E. E. L. Weyerhauser St. to Fessenden St.	2	W. I.	1,808
Ivanhoe St., New York St. to 80 ft. W. W. L. Chicago St.	1	W. I.	160
Ivanhoe St., 105 ft. W. W. L. Baltimore St. to 80 ft. E. E. L. Alta St.	2	W. I.	500
Ivanhoe St., Charleston St. to Richmond St.	1	W. I.	270
Ivanhoe St., 260 ft. W. W. L. Mohawk St., L. S., to Mohawk St., L. N.	2	W. I.	465
Ivanhoe St., Polk St. to Alma	2	W. I.	1,470
Hayes St., 130 ft. E. E. L. Weyerhauser Ave. to 180 ft. W.W.L. Reno	1	W. I.	256
Hayes St., 180 ft. W. W. L. Reno St. to 260 ft. E. E. L. Reno St.	2	W. I.	500
Hayes St., 260 ft. E. E. L. Reno St. to 120 ft. E. E. L. Catlin St.	4	C. I.	1,120
Hayes St., 120 ft. E. E. L. Catlin St. to 110 ft. E. E. L. Fessenden St.	6	C. I.	890
Hayes St., 110 ft. E. E. L. Fessenden St. to 30 ft. W. W. L. Burlington	4	Wood	1,340
Hayes St., 30 ft. W. W. L. Burlington St. to 20 ft. W. E. L. Burlington	6	C. I.	70
Hayes St., Burlington St. to Leavitt St.	4	C. I.	260
Hayes St., E. L. Leavitt St. to W. L. John St.	2	W. I.	200
Hayes St., 220 ft. E. E. L. Mohawk St. to Mohawk St.	1	W. I.	260
Hayes St., Polk St. to 40 ft. E. E. L. Buchanan St.	1	W. I.	628
Hayes St., 40 ft. E. E. L. Buchanan St. to 135 ft. E. E. L. Alma	2	W. I.	1,055
Gresham St., John St. to Charleston St.	1	W. I.	220
Gresham St., 20 ft. W. E. L. Richmond St. to 20 ft. E. E. L. Richmond St.	2	W. I.	40
Gresham St., 20 ft. E. E. L. Richmond St. to Erie St.	1	W. I.	260
Gresham St., Erie St. to 30 ft. W. W. L. Mohawk St.	2	W. I.	190
Gresham St., 327 ft. W. W. L. Tyler St. to Tyler St.	2	W. I.	367
Gresham St., 180 ft. W. W. L. Polk St. to Polk St.	1	W. I.	200
Gresham St., Buchanan St. to 80 ft. W. W. L. Burr St.	1	W. I.	385
Gresham St., 80 ft. W. W. L. Burr St. to 165 ft. W. W. L. Ida St.	2	W. I.	850
Gresham St., 165 ft. W. W. L. Ida St. to Ida St.	1	W. I.	185
Dawson St., Oswego St. to E. L. Gilbert	2	W. I.	3,526
Stafford St., Mohawk St. to 70 ft. W. W. L. Tyler St.	1	W. I.	270
Stafford St., 70 ft. W. W. L. Tyler St. to Buchanan St.	2	W. I.	970
Lynn Ave., Buchanan St. to 80 ft. E. E. L. Burr St.	2	W. I.	590
Lynn Ave., 80 ft. E. E. L. Burr St. to Alma St.	1	W. I.	340
Lynn Ave., Alma St. to 40 ft. W. W. L. Ida St.	2	W. I.	393
Princeton St., 220 ft. W. W. L. Gilbert St. to 135 ft. W. W. L. Macrum St.	1	W. I.	660
Willamette Blvd., 405 ft. W. W. L. Reno St. to Reno St.	1	W. I.	425
Willamette Blvd., 240 ft. W. W. L. St. Johns Ave. to St. Johns Ave.	1	W. I.	280
Willamette Blvd., St. Johns Ave. to Baltimore St.	4	C. I.	2,340
Willamette Blvd., Baltimore St. to Alta St.	2	W. I.	280
Willamette Blvd., Burlington St. to Polk St.	6	C. I.	2,433

PIPE ACQUIRED BY PURCHASE DURING THE FISCAL YEAR ENDING NOVEMBER 30, 1916—(St. Johns Water System)—Continued

	Size (Inches)	Kind	Length (Feet)
Willamette Blvd., Polk St. to Burr St	2	Wood	160
Willamette Blvd., Polk St. to Burr St	2	W. I.	977
Willamette Blvd., Burr St. to W. L. Alma St. and S. to S. L. of Willamette Blvd	6	C. I.	590
Willamette Blvd., W. L. Alma St. to E. L. S. P. & S. right of way	2	W. I.	580
E. L. of S. P. & S., Willamette Blvd. to Amherst St	2	W. I.	130
Amherst St., E. L. S. P. & S. right of way to Macrum St	2	W. I.	930
Yale St., Macrum St. to alley E. of Westanna St	1	W. I.	895
Yale St., Macrum St. to 377 ft. W. W. L. Macrum St	1	W. I.	397
Edison St., 500 ft. W. E. L. Weyerhauser Ave. to St. Johns Ave.	1	W. I.	1,725
Edison St., St. Johns Ave. to Baltimore St	2	W. I.	2,358
Edison St., 30 ft. E. E. L. Baltimore St. to Alta St	1	W. I.	210
Edison St., Pittsburgh St. to W. L. John St	1	W. I.	760
Edison St., W. L. John St. to 20 ft. W. W. L. Charleston St	2	W. I.	240
Edison St., 165 ft. W. W. L. Tyler St. to Tyler St	1	W. I.	205
Edison St., 85 ft. W. W. L. Polk St. to 190 ft. E. E. L. Polk St	2	Wood	180
Edison St., 85 ft. W. W. L. Polk St. to 190 ft. E. E. L. Polk St	2	W. I.	155
Willamette Blvd., John St. to Erie St	6	Steel	790
Willamette Blvd., John St. to Erie St	8	Wood	350
Willamette Blvd., John St. to Erie St	8	C. I.	490
Decatur St., Burlington to 20 ft. W. W. L. Leavitt St	1	W. I.	210
Decatur St., 70 ft. E. E. L. Leavitt St. to E. L. John St	2	W. I.	190
Decatur St., E. L. John St. to W. L. Charleston St	1	W. I.	200
Decatur St., 10 ft. W. W. L. Richmond St. to E. L. Richmond St	1	W. I.	80
Decatur St., Polk St. to Pierce St	1	W. I.	380
Crawford St., 35 ft. E. E. L. Fessenden to New York Sts	1	W. I.	185
Crawford St., Baltimore St. to Alta St	1	W. I.	280
Crawford St., 35 ft. W. W. L. Pittsburgh to 75 ft. E. E. L. Salem St	2	W. I.	430
Crawford St., 75 ft. E. E. L. Salem St. to John St	1	W. I.	710
Crawford St., John St. to Charleston St	1.25	W. I.	260
Crawford St., Charleston St. to 10 ft. W. W. L. Pierce St	1	W. I.	1,980
Cook St., Pierce St. to Buchanan St	1	W. I.	300
Bradford St., New York St. to Baltimore St	1	W. I.	520
Bradford St., Baltimore to Richmond St	6	C. I.	2,540
Bradford St., Richmond St. to 1,850 ft. E. E. L. Richmond St	6	C. I.	1,930
Bradford St., Pittsburg St. to Salem St	1	W. I.	260
Burlington St., 110 ft. S. S. L. Crawford St. to Decatur St	1	W. I.	390
Burlington St., Decatur St. to Willamette Blvd	1.25	W. I.	500
Burlington St., Willamette Blvd. to Jersey St	6	C. I.	1,050
Burlington St., 100 ft. S. S. L. Kellogg St. to Leonard St	1	W. I.	400
Burlington St., Leonard St. to Central Ave	2	W. I.	384
Leavitt St., Bradford St. to 20 ft. N. N. L. Bradford St	4	C. I.	40
Leavitt St., 40 ft. N. N. L. Edison St. to 10 ft. S. N. L. Willamette Blvd	1	W. I.	150
Leavitt St., 10 ft. S. N. L. Willamette Blvd. to 25 ft. N. N. L. same	2	W. I.	95
Leavitt St., 25 ft. N. N. L. Willamette Blvd. to 165 ft. N. N. L. Willamette Blvd	1	W. I.	140
Leavitt St., Hayes St. to Leonard St	4	Wood	1,060
Leavitt St., Leonard St. to 135 ft. N. N. L. Leonard St	1	W. I.	155
Leavitt St., Central Ave. to 274 ft. N. N. L. Central Ave	1	W. I.	294
Cruikshank, Hartman St. to Swenson St	1	W. I.	240
Cruikshank, S. L. Hartman St. to N. L. Hartman St	2	W. I.	70
Barr St., Swenson St. to 160 ft. N. N. L. Swenson St	1	W. I.	180
John St., Bradford St. to Willamette Blvd	6	C. I.	1,010
John St., Crawford St. to Hayes St	2	W. I.	1,320
John St., Willamette Blvd. to 130 ft. S. S. L. of Edison St	8	C. I.	400
John St., Hayes St. to 20 ft. S. S. L. Jersey St	1.25	W. I.	480
John St., 20 ft. S. S. L. Jersey St. to 20 ft. N. N. L. Jersey St	2	W. I.	100
John St., 20 ft. N. N. L. Jersey St. to Leonard St	1.25	W. I.	480
John St., Leonard St. to Central Ave	4	C. I.	225
John St., Central Ave. to Hudson St	1	W. I.	520

PIPE ACQUIRED BY PURCHASE DURING THE FISCAL YEAR ENDING NOVEMBER 30, 1916—(St. Johns Water System)—Continued

	Size (Inches)	Kind	Length (Feet)
John St., 130 ft. S. S. L. Smith Ave. to 245 ft. N. N. L. Smith Ave	1	W. I.	443
Charleston St., 110 ft. S. S. L. Willamette Blvd. to Willamette Blvd	1	W. I.	120
Charleston St., Gresham St. to 45 ft. S. S. L. Hayes St	1	W. I.	175
Charleston St., 100 ft. S. S. L. Ivanhoe St. to Ivanhoe St	1	W. I.	120
Charleston St., 65 ft. N. N. L. Kellogg St. to Leonard St	1	W. I.	175
Charleston St., Central Ave. to N. L. Hudson St	1	W. I.	515
Charleston St., N. L. Hudson St. to S. L. Smith Ave	2	W. I.	450
Charleston St., S. L. Smith Ave. to 275 ft. N. N. L. Smith Ave.	1	W. I.	355
Charleston St., 275 ft. N. N. L. Smith Ave. to N. L. Fessenden St	2	W. I.	760
Charleston St., N. L. Fessenden St. to Fox St	1	W. I.	225
Charleston St., Swenson St. to 540 ft. N. N. L. Swenson St	1	W. I.	565
Richmond St., Bradford St. to 30 ft. N. N. L. Bradford St	6	C. I.	50
Richmond St., 30 ft. N. N. L. Bradford St. to Crawford St	1	W. I.	190
Richmond St., Gresham St. to Jersey St	2	W. I.	780
Richmond St., Jersey St. to Columbia Blvd	6	C. I.	90
Richmond St., Central Ave. to Hudson St	1.5	W. I.	495
Richmond St., Hudson St. to 175 ft. N. N. L. Seneca St	2	Wood	500
Richmond St., Hudson St. to 175 ft. N. N. L. Seneca St	2	W. I.	715
Richmond St., 175 ft. N. N. L. Seneca St. to 10 ft. S. S. L. Fessenden St	1	W. I.	265
Columbia Blvd., Richmond St. to Oswego St	6	C. I.	400
Columbia Blvd., Oswego St. to Mohawk St	1	W. I.	490
Columbia Blvd., Smith Ave. to Midway Ave	6	C. I.	650
Columbia Blvd., Midway Ave. to Seneca St	2	W. I.	240
Columbia Blvd., 100 ft. S. S. L. Fessenden St. to Oregonian Ave.	2	W. I.	250
Erie St., 30 ft. N. N. L. Bradford St. to 120 ft. N. N. L. Crawford	1	W. I.	350
Erie St., Willamette Blvd. to 120 ft. N. S. L. Willamette Blvd	6	Steel	140
Erie St., Willamette Blvd. to 60 ft. N. S. L. Willamette Blvd	6	C. I.	140
Erie St., 60 ft. N. N. L. Willamette Blvd. to Gresham St	8	C. I.	140
Oswego St., Columbia Blvd. to 20 ft. N. N. L. Smith Ave	6	C. I.	1,570
Oswego St., 20 ft. N. N. L. Smith Ave. to 40 ft. S. S. L. Swenson St	2	Wood	750
Oswego St., 20 ft. N. N. L. Smith Ave. to 40 ft. S. S. L. Swenson St	2	W. I.	1,110
Oswego St., 40 ft. S. S. L. Swenson St. to Swenson St	1	W. I.	60
Mohawk St., 60 ft. S. S. L. Bradford St. to 165 ft. N. N. L. Crawford St	1	W. I.	545
Mohawk St., Willamette Blvd. to 130 ft. N. N. L. Willamette Blvd	1	W. I.	200
Mohawk St., 130 ft. N. N. L. Willamette Blvd. to Jersey St., L. E.	2	W. I.	810
Mohawk St., Jersey St., L. E., to Jersey St., L. W	6	C. I.	50
Mohawk St., Columbia Blvd. to 90 ft. N. N. L. Columbia Blvd.	1	W. I.	140
Mohawk St., Central Ave. to Fessenden St	2	W. I.	2,005
Mohawk St., Fessenden St. to 205 ft. N. N. L. Olympia St	1.5	W. I.	725
Mohawk St., 30 ft. N. N. L. Bank St. to County Road	1.5	W. I.	710
Allegheny St., 35 ft. N. N. L. Central Ave. to S. L. Seneca St	2	W. I.	1,415
Allegheny St., S. L. Seneca St. to 25 ft. S. S. L. Fessenden St	1	W. I.	485
Allegheny St., 25 ft. S. S. L. Fessenden St. to 270 ft. N. N. L. Fessenden	2	W. I.	355
Allegheny St., 15 ft. N. N. L. Bank St. to County Road	2	W. I.	650
Tyler St., Bradford St. to 110 ft. N. N. L. Crawford	1	W. I.	410
Tyler St., Edison St. to 50 ft. S. S. L. Willamette Blvd	2	W. I.	150
Tyler St., 50 ft. S. S. L. Willamette Blvd. to Willamette Blvd	4	C. I.	70
Tyler St., From 6-in. main Willamette Blvd. to 30 ft. North	2	W. I.	30
Tyler St., 60 ft. N. N. L. Willamette Blvd. to Jersey St	2	W. I.	880
Tyler St., 95 ft. N. N. L. Central Ave. to Seneca St	2	W. I.	1,395
Tyler St., Seneca St. to 65 ft. S. S. L. Fessenden St	1	W. I.	405
Tyler St., 25 ft. N. N. L. Bank St. to County Road	2	W. I.	540
Polk St., Crawford St. to Willamette Blvd	2	W. I.	780
Polk St., Willamette Blvd. to Jersey St	6	C. I.	1,016
Polk St., Jersey St. to Stafford St	2	W. I.	260

PIPE ACQUIRED BY PURCHASE DURING THE FISCAL YEAR ENDING NOVEMBER 30, 1916—(St. Johns Water System)—Continued

	Size (Inches)	Kind	Length (Feet)
Polk St., Stafford St. to S. L. Dawson St	1	W. I.	235
Polk St., 70 ft. N. N. L. Central Ave. to N. L. Hudson St	2	W. I.	400
Polk St., N. L. Hudson St. to S. L. Seneca St	6	C. I.	980
Polk St., S. L. Seneca St. to 50 ft. S. S. L. Fessenden St	2	W. I.	460
Polk St., 60 ft. N. N. L. Bank St. to County Road	2	W. I.	410
Pierce St., Crawford to Decatur Sts	1	W. I.	260
Tiogo St., 50 ft. N. N. L. Central Ave. to 170 ft. S. S. L. Smith Ave	2	W. I.	705
Tiogo St., 170 ft. S. S. L. Smith Ave. to Smith Ave	1	W. I.	230
Tiogo St., Smith Ave. to 210 ft. N. N. L. Smith Ave	2	W. I.	230
Tiogo St., 210 ft. N. N. L. Smith Ave. to 25 ft. S. S. L. Fessenden St	1	W. I.	725
Buchanan St., 20 ft. N. S. L. Willamette Blvd. to 20 ft. S. N. L. Willamette Blvd	2	W. I.	60
Buchanan St., Willamette Blvd. to 60 ft. N. N. L. Gresham St	1	W. I.	333
Buchanan St., Ivanhoe St., L. W., to Ivanhoe St., L. E	2	W. I.	50
Buchanan St., Jersey St. , L. W., to Jersey St., L. E	6	C. I.	50
Buchanan St., Stafford St., L. W., to Stafford St., L. E	2	W. I.	45
Buchanan St., 275 ft. S. S. L. Hudson to 75 ft. S. S. L. Hudson	2	W. I.	200
Buchanan St., 75 ft. S. S. L. Hudson to Hudson St	1	W. I.	120
Buchanan St., 75 ft. S. S. L. Smith Ave. to 20 ft. N. S. L. Smith Ave	1.25	W. I.	90
Buchanan St., 20 ft. N. S. L. Smith Ave. to 25 ft. N. N. L. Smith Ave	2	W. I.	85
Buchanan St., 25 ft. N. N. L. Smith Ave. to 90 ft. S. S. L. Fessenden St	1.25	W. I.	845
Buchanan St., 90 ft. S. S. L. Fessenden St. to 40 ft. S. S. L. Olympia St	2	W. I.	555
Buchanan St., Bank St. to County Road	2	W. I.	300
Newton St., Smith Ave. to 225 ft. S. S. L. Bank St	4	C. I.	1,775
Burr St., Willamette Blvd. to Jersey St	6	C. I.	1,130
Burr St., Jersey St. to Dawson St	2	W. I.	520
Burr St., Smith Ave. to Seneca St	2	W. I.	560
Burr St., 10 ft. N. N. L. Fessenden St. to Bank St	1	W. I.	950
Alma St., 50 ft. N. N. L. Hayes St. to 40 ft. N. N. L. Ivanhoe St	1	W. I.	250
Alma St., 40 ft. N. N. L. Ivanhoe St. to Jersey St	1.5	W. I.	180
Alma St., Lynn Ave. to N. L. Lynn Ave	2	W. I.	40
Alma St., N. L. Lynn Ave. to S. L. Dawson Ave	1	W. I.	200
Alma St., S. L. Dawson Ave. to 20 ft. N. S. L. Dawson Ave	2	W. I.	20
Ida St., Amherst to Gresham Sts	1	W. I.	325
W. L. S. P. & S. right of way, Willamette Blvd., to Ida St	1.25	W. I.	170
Midway Ave., Columbia Blvd. to Bellingham St	4	C. I.	3,052
Midway Ave., Bellingham St. to 75 ft. N. N. L. Bellingham St	2	W. I.	95
Laura St., Dawson St. to 40 ft. S. S. L. Central Ave	1	W. I.	420
Gilbert St., Dawson St. to 70 ft. N. N. L. Dawson	1	W. I.	110
Gilbert St., 355 ft. S. S. L. Seneca St. to Seneca St	1	W. I.	395
Gilbert St., Seneca St. to Columbia Blvd	2	W. I.	535
Oregonian Ave., Columbia Blvd. to Powers St	2	W. I.	330
Oregonian Ave., Mears St. to Olympia St	1	W. I.	276
Minerva St., 350 ft. S. S. L. Seneca St. to 185 ft. N. N. L. Seneca St	1	W. I.	595
Macrum St., Yale St. to Amherst St	1	W. I.	330
Macrum St., Cecelia St. to Columbia Blvd	1.5	W. I.	310
Macrum St., Columbia Blvd. to S. L. Powers St	2	W. I.	80
Macrum St., Powers St. to Mears St	4	C. I.	315
Macrum St., Bank St. to Swift St	2	W. I.	276
Alley N. of Fessenden, Macrum St. to East through Block 18, to Alley	1.5	W. I.	350
Marion St., 20 ft. E. W. L. Burr St. to 170 ft. E. E. L. Burr St	2	W. I.	210
Marion St., 20 ft. E. W. L. Ida St. to 180 ft. W. W. L. Ida St	1	W. I.	200
Bradford St., Burlington to Pittsburgh Sts	6	C. I.	88
John St., Jersey St. to Kellogg St	6	C. I.	96
Hayes St., Philadelphia to Alta St	4	C. I.	64
Newton St., Fessenden to Seneca St	4	C. I.	66

PIPE ACQUIRED BY PURCHASE DURING THE FISCAL YEAR ENDING NOVEMBER 30, 1916—(St. Johns Water System)—Continued

	Size (Inches)	Kind	Length (Feet)
Hartman St., Seneca St. to Smith Ave	2	W. I.	135
St. Johns Ave., between Kellogg and Kellogg Sts	2	W. I.	110
Tyler St., Gresham to Willamette Blvd	2	W. I.	170
Newton St., end of 4-in. to Bank St	2	W. I.	440
Edison St., from end of pipe on extension of Edison St	1	W. I.	1,140
Buchanan St., South from Smith St	2	W. I.	250
Meyers St., from 2-in. to end of street	1	W. I.	300
Oswego St., South from County Road	2	W. I.	300
Swenson St., 400 ft. W. of Oswego St. to connect to 1-in. end	1	W. I.	400
Burr St., Smith St. to Hudson St	1	W. I.	400
Alta St., Hayes St. to Ivanhoe St	1	W. I.	200
Alta St., Willamette Blvd. to Decatur	1	W. I.	450
Pittsburgh St., Decatur St. to Edison St	1	W. I.	220
Total			180,096

Summary

Size	C. I. Miles	Steel or W. I. Miles	Wood Miles	Total Miles
1 -inch	.....	9.690	.....	9.690
1¼-inch	.....	0.535	.....	0.535
1½-inch	.....	1.349	.....	1.349
2 inch	.....	12.722	0.874	13.596
4 -inch	2.305	.....	0.492	2.797
6 -inch	5.684	0.176	.....	5.860
8 -inch	0.195	.....	0.066	0.261
Total	8.184	24.472	1.432	34.088

Price paid for entire St. Johns System $108,000.00

RECAPITULATION
PIPE EXTENSIONS COMPLETED DURING THE FISCAL YEAR ENDING NOVEMBER 30, 1916
(By Department Forces)

Size (inches)	West Side Miles	East Side Miles	Albina Miles	Total Miles
2	0.057	1.650	0.858	2.565
Total under 4"	0.057	1.650	0.858	2.565
4	.....	0.043	.....	0.043
6	0.341	0.925	0.256	1.522
8	.....	2.167	1.550	3.717
12	.....	0.335	0.190	0.525
Total 4" and over	0.341	3.470	1.996	5.807

PIPE EXTENSIONS ACQUIRED BY BILL OF SALE DURING THE FISCAL YEAR ENDING NOVEMBER 30, 1916

Size (inches).	West Side Miles	East Side Miles	Albina Miles	Total Miles
¾	.....	0.086	.....	0.086
1	0.053	0.188	0.058	0.299
1¼	0.048	.....	.....	0.048
1½	.....	0.067	0.081	0.148
2	0.140	0.371	0.286	0.797
	0.241	0.712	0.425	1.378

PIPE EXTENSIONS ACQUIRED BY PURCHASE DURING THE FISCAL YEAR ENDING NOVEMBER 30, 1916

(St. Johns System and 210 Feet, 6 Inches on E. Main St.)

Size (inches)	West Side Miles	East Side Miles	Albina Miles	Total Miles
1	.....	.....	9.690	9.690
1¼	.....	.....	0.535	0.535
1½	.....	.....	1.349	1.349
2	.....	.....	13.596	13.596
4	.....	.....	2.797	2.797
6	.....	0.040	5.860	5.900
8	.....	.....	0.261	0.261
	.....	0.040	34.088	34.128

TOTALS

Size (inches)	West Side Miles	East Side Miles	Albina Miles	Total Miles
¾	.....	0.086	.....	0.086
1	0.053	0.188	9.748	9.989
1¼	0.048	.....	0.535	0.583
1½	.....	0.067	1.430	1.497
2	0.197	2.021	14.740	16.958
4	.....	0.043	2.797	2.840
6	0.341	0.965	6.116	7.422
8	.....	2.167	1.811	3.978
12	.....	0.335	0.190	0.525
	0.639	5.872	37.367	43.878

PIPE ABANDONED OR REMOVED DURING THE FISCAL YEAR ENDING NOVEMBER 30, 1916

West Side

	Size (Inches)	Kind	Length (Feet)
Ford St., Main St. to Madison St	6	W. I.	286

Summary

Size (inches)	C. I. Miles	Steel or W. I. Miles	Wood Miles	Total Miles
6	.....	0.054	.....	0.054

PIPE ABANDONED OR REMOVED DURING THE FISCAL YEAR ENDING NOVEMBER 30, 1916

East Side

	Size (Inches)	Kind	Length (Feet)
E. Madison St., 12 ft. W. E. L. E. 47th to 78 ft. E. E. L. E. 47th	2	W. I.	90
47th St., 18 ft. N. S. L. E. Madison to 346 ft. N. N. L. E. Madison	2	W. I.	368
42nd Ave. S. E., 16 ft. W. E. L. E. 67th to 14 ft. W. E. L. E. 72nd	1¼	W. I.	1,325
E 91st St., Foster Road to 63rd Ave. S. E	1	W. I.	833
E. 30th St., 14 ft. N. S. L. Gladstone to 78 ft. N. N. L. Cora	2	W. I.	336
E. 30th St., 14 ft. N. S. L. Gladstone to 226 ft. S. S. L. Gladstone	1¼	W. I.	240
55th Ave. S. E., 92nd St. S. E. to 94th St. S. E	¾	W. I.	242
55th Ave. S. E., 94th St. S. E. to 97th St. S. E	1	W. I	1,083
E. Salmon St., 17 ft. W. E. L. E. 34th to 18 ft. E. W. L. E. 35th	6	C. I.	335
56th ave. S. E., 4 ft. E. E. L. E. 87th to 81 ft. E. E. L. E. 87th	1½	W. I.	77
37th Ave. S. E., 105 ft. E. E. L. 52nd St. to 45 ft. W. W. L. E. 54th	1¼	W. I.	270
E. 76th St., 14 ft. N. S. L. to 28 ft. N. S. L. Hawthorne Ave	12	Wood	14
E. Main St., E. 41st to E. 43rd St	¾	W. I.	334
45th Ave. S. E., 13 ft. E. E. L. to 209 ft. E. E. L. E. 74th St	1¼	W. I.	196
100th St. S. E., 12 ft. S. S. L. 64th Ave. to 32 ft. S. N. L. 67th Ave.	2	Wood	707
97th St. S. E., 14 ft. S. N. L. 65th Ave. to 38 ft. N. S. L. 67th Ave.	2	Wood	583
65th Ave. S. E., 5 ft. W. E. L. E. 97th to 15 ft. E. W. L. E. 100th St	1¼	W. I.	581
65th Ave. S E., 5 ft. W.E.L. E. 97th to 14 ft. W. E. L. E. 97thSt.	2	W. I.	9
100th St. S. E., 95 ft. N. N. L. 67th Ave. to 193 ft. N. N. L. 67th Ave	4	W. I.	98
Private Property, 193 ft. N. N. L. 67th Ave. 14 ft. W. E. L. to 94 ft. West of 100th St	4	W. I.	94
E. 61st St., 77 ft. S. S. L. E. Ankeny to 384 ft. S. S. L. E. Ankeny	¾	W. I.	307
E. Salmon St., 18 ft. W. E. L. E. 76th to 125 ft. E. E. L. E. 76th	1¼	W. I.	144
E. Salmon St., 17 ft. E. E. L. E. 78th St. to 18 ft. W. E. L. E. 80th	1	W. I.	425
E. 60th St., 63rd Ave. to 65th Ave	1	W. I.	596
Broadway, W. L. Williams Ave. to 20 ft. W. E. L. Victoria St	6	C. I.	300
E. 37th St., Knapp Ave. to Tenino Ave	4	Wood	2,273
E. 39th St., Ogden St. to Bybee Ave	4	Wood	446
E. 39th St., Henderson St. to Tenino Ave	4	Wood	2,023
Gilbert Road, 70 ft. E. E. L. Jordan to 189 ft. E. E. L. Jordan	½	W. I.	119
97th St., S. E., Foster Road to 65th Ave., L. E	10	Wood	975
65th Ave. S. E., 97th St. to 176 ft. East	1¼	W. I.	179
Mall St., 6 ft. W. W. L. E. 42nd to 465 ft. W. W. L. E. 42nd	2	Wood	459
Mall St., 15 ft. W. E. L. E. 42nd St. to 6 ft. W. W. L. E. 42nd St.	1½	W. I.	51
E. Oak St., E. 3rd St. to Union Ave	4	C. I.	186
Total			16,298

Summary

Size (inches)	C. I. Miles	Steel or W. I. Miles	Wood Miles	Total Miles
½	.....	0.023	.....	0.023
¾	.....	0.167	.....	0.167
1	.....	0.556	.....	0.556
1¼	.....	0.556	.....	0.556
1½	.....	0.024	.....	0.024
2	.....	0.152	0.331	0.483
4	0.035	0.036	0.898	0.969
6	0.120	.....	.....	0.120
10	.....	.....	0.185	0.185
12	.....	.....	0.003	0.003
	0.155	1.514	1.417	3.086

PIPE ABANDONED OR REMOVED DURING THE FISCAL YEAR ENDING NOVEMBER 30, 1916

Albina

ALBINA	Size (Inches)	Kind	Length (Feet)
Minnesota Ave., Fremont St. to Revere St.	1	W. I.	331
Courtney St., 17 ft. S. N. L. Lombard St. to 414 ft. N. N. L. same	1	W. I.	431
Hunt St., 10 ft. W. E. L. Haven St. to 45 ft. E. E. L. Haven St.	1	W. I.	55
Haven St., Hunt St. to 270 ft. N. N. L. Hunt St.	1	W. I.	270
Private property at Courtenay and Girard, Hodge St. to Haven	2	W. I.	563
Union Ave., 13 ft. N. S. L. Stafford St. to 41 ft. N. N. L. Bryant	2	W. I.	1,096
Stafford St., 22 ft. W. E. L. Union Ave. to 18 ft. W. W. L. Union	1	W. I.	71
Buffalo St., 22 ft. W. E. L. Union Ave. to 5 ft. W. W. L. Union Ave.	1	W. I.	58
Union Ave., S. L. Bryant St. to 41 ft. N. N. L. Bryant St.	2	W. I.	91
Bryant St., 22 ft. W. E. L. Union Ave. to 90 ft. W. W. L. Union	2	W. I.	148
Morse St., Durham Ave. to 346 ft. North	1.25	W. I.	346
Morse St., Dekum Ave. to 160 ft. South	¾	W. I.	160
Going St., 16 ft. E. W. L. E. 10th St. to E. L. E. 10th St.	2	W. I.	34
E. 18th St., Alberta St. to Killingsworth Ave.	2	W. I.	1,345
Ainsworth Ave., 18 ft. W. E. L. E. 9th St. to 66 ft. E. E. L. E. 10th	4	Kal.	342
Michigan Ave., Portland Blvd. to Dekum Ave.	1	W. I.	598
Gay St., Willamette Blvd. to Killingsworth Ave.	1	W. I.	254
Lombard St., Laura St. to Ida St.	2	W. I.	299
Laura St., 22 ft. E. W. L. to 8 ft. E. E. L. Lombard St.	1	W. I.	56
Ida St., 22 ft. E. W. L. to 8 ft. E. E. L. Lombard St.	1	W. I.	56
Macrum Ave., Amherst to Yale St.	1	W. I.	267
Amherst St., Macrum Ave. to Carey Blvd.	2	W. I.	800
Carey Blvd., Amherst to Willamette Blvd.	2	W. I.	154
Willamette Blvd., across S. P. & S. bridge	2	W. I.	374
Total			8,199

Summary

Size (inches)	C. I. Miles	Steel or W. I. Miles	Wood Miles	Total Miles
¾	.....	0.030	.....	0.030
1	.....	0.463	.....	0.463
1¼	.....	0.066	.....	0.066
2	.....	0.929	.....	0.929
4	.....	0.065	.....	0.065
	.....	1.553	.....	1.553

RECAPITULATION

PIPE ABANDONED OR REMOVED DURING THE FISCAL YEAR ENDING NOVEMBER 30, 1916

Size (inches)	West Side Miles	East Side Miles	Albina Miles	Total Miles
½	.....	0.023	.....	0.023
¾	.....	0.167	0.030	0.197
1	.....	0.556	0.463	1.019
1¼	.....	0.556	0.066	0.662
1½	.....	0.024	.....	0.024
2	.....	0.483	0.929	1.412
4	.....	0.969	0.065	1.034
6	0.054	0.120	.....	0.174
10	.....	0.185	.....	0.185
12	.....	0.003	.....	0.003
	0.054	3.086	1.553	4.693

RECAPITULATION

DISTRIBUTION SYSTEM—FISCAL YEAR ENDING NOVEMBER 30, 1916

Mains 4 Inches in Diameter and Over Laid, and Mains Taken Out or Abandoned, Showing Net Increase

WEST SIDE	4-in.	5-in.	6-in.	7-in.	8-in.	10-in.
Laid or acquired	.....	.....	0.341	.....	.....	.....
Removed or abandoned	.....	.....	0.054	.....	.....	.....
Net increase	.....	.....	0.287	.....	.....	.....
EAST SIDE						
Laid or acquired	0.043	.....	0.965	.....	2.167	.....
Removed or abandoned	0.969	.....	0.120	.....	.....	0.185
Net increase	(-0.926)	.....	0.845	.....	2.167	(-0.185)
ALBINA						
Laid or acquired	2.797	.....	6.116	.....	1.811	.....
Removed or abandoned	0.065	.....	.....	.....	.....	.....
Net increase	2.732	.....	6.116	.....	1.811	.....

DISTRIBUTION SYSTEM—FISCAL YEAR ENDING NOVEMBER 30, 1916

Mains 4 Inches in Diameter and Over Laid, and Mains Taken Out or Abandoned, Showing Net Increase—Continued

WEST SIDE	12-in.	16-in.	20-in.	24-in.	30-in.	Total Miles
Laid or acquired	.....	.....	.....	.....	.....	0.341
Removed or abandoned	.....	.....	.....	.....	.....	0.054
Net increase	.....	.....	.....	.....	.....	0.287
EAST SIDE						
Laid or acquired	0.335	.....	.....	.....	.....	3.510
Removed or abandoned	0.003	.....	.....	.....	.....	1.277
Net increase	0.332	.....	.....	.....	.....	2.233
ALBINA						
Laid or acquired	0.190	.....	.....	.....	.....	10.914
Removed or abandoned	.....	.....	.....	.....	.....	0.065
Net increase	0.190	.....	.....	.....	.....	10.849
Total miles of pipe laid or acquired, 4-in. diameter and over						14.765
Total miles of pipe removed or abandoned, 4-in. diameter and over						1.396
Net increase, 4-in. diameter and over						13.369

RECAPITULATION

DISTRIBUTION SYSTEM—FISCAL YEAR ENDING NOVEMBER 30, 1916

Mains Laid Under 4 Inches in Diameter, Taken Out or Abandoned, Showing Net Increase

WEST SIDE	½-in.	¾-in.	1-in.	1¼-in.	1½-in.
Laid or acquired			0.053	0.048	
Removed or abandoned					
Net increase			0.053	0.048	
EAST SIDE					
Laid or acquired		0.086	0.188		0.067
Removed or abandoned	0.023	0.167	0.556	0.556	0.024
Net increase	(-0.023)	(-0.081)	(-0.368)	(-0.556)	0.043
ALBINA					
Laid or acquired			9.748	0.535	1.430
Removed or abandoned		0.030	0.463	0.066	
Net increase		(-0.030)	9.285	0.469	1.430

DISTRIBUTION SYSTEM—FISCAL YEAR ENDING NOVEMBER 30, 1916

Mains Laid Under 4 Inches in Diameter, Taken Out or Abandoned, Showing Net Increase—(Continued

WEST SIDE	2-in.	2½-in.	3-in.	Total Miles
Laid or acquired	0.197			0.298
Removed or abandoned				
Net increase	0.197			0.298
EAST SIDE				
Laid or acquired	2.021			2.362
Removed or abandoned	0.483			1.809
Net increase	1.538			0.553
ALBINA				
Laid or acquired	14.740			26.453
Removed or abandoned	0.929			1.488
Net increase	13.811			24.965

Total miles pipe laid or acquired under 4-in. diameter....29.113
Total miles pipe removed or abandoned under 4-in. diameter....3.297

Net increase under 4-in. diameter....25.816

BUREAU OF STREET CLEANING

Portland, Ore., February 1, 1917.

Honorable Will H. Daly, Commissioner Public Utilities, City Hall, City.

Dear Sir: I beg leave to submit the annual report of the operation of the Bureau of Street Cleaning for the fiscal year ending November 30, 1916.

Attached to this report, you will find a tabulated statement showing the amount of work performed, costs, etc., in the various activities of the Bureau.

During the past year the Bureau advanced considerably along the line of modern methods in street cleaning. By so doing the cost of cleaning the streets has been lowered, and at the same time the Bureau has given better satisfaction.

The method of sweeping the streets with horse-drawn machines is being abandoned as quickly as the purchase of flushing apparatus will permit. Flushing is recognized, the country over, as the ideal system for cleaning streets. By this method, even the smallest particles of dust and germ-laden refuse are removed. By the sweeping, no matter how well and carefully a street is swept, as soon as the street becomes dry, there is a layer of dust, which soon works up and is then carried by the wind into the stores and houses. Taking the cost into consideration, the tabulated statement will show flushing by horse-drawn apparatus approximately 7½ cents, and by automobile apparatus 12½ cents cheaper, per thousand square yards, than the cost of sweeping with horse-drawn sweepers.

The three motor-driven flushers were put into service during the past year. So far they are giving excellent satisfaction and showing their worth, both in the quality of their work and cost of operation. If the Bureau had more equipment of this kind we would be able to give better service in some districts which should be cleaned with greater frequency, and also abandon still further the sweeping method.

There are certain paved sections in the outlying districts which cannot be flushed owing to the lack of sewers. In caring for these streets, the motor-driven sweeper does excellent work. The cost of actual work performed by this machine is high, according to the statement. However, owing to the remote districts in which it works, the cost of cleaning these streets would be much higher if performed by horse-drawn apparatus. In past years, when these streets were cleaned by the horse-drawn sweepers, it required four hours for the apparatus to go and come, while this machine only requires an hour and a half.

The Bureau is operating two machines known as "Squeegee Street Washers." These machines can only be used, with good results, on perfectly smooth pavements. On this class of streets, however, they do very good work and at a very low figure.

The Patrol Sweeping Squad, last year, consisted of 13 men, employed only in the business district. This work costs considerable, but as will be seen by the amount of refuse taken off the streets, their work is almost indispensable in keeping the streets in a presentable condition during the hours of the day when the public sees them.

The handsweeping method is employed only on the steep hills, where it is not practical to take the machines, or during cold weather, when it is not safe to wet the streets and thereby take the chance of having them freeze.

Most of the macadam and gravel streets were cleaned twice during the year, which was as much service as could be given on this class of streets with the force employed.

I will also call your attention to the oiling of these macadam and gravel streets, which was done at a cost of $17.14 per mile, six feet wide. In preparing to do this work last spring, the Bureau equipped another truck with the necessary apparatus. With the two trucks we were able to perform the work quicker than in former years.

During the past year the catch-basins were cleaned out with shovels. It is the intention of the department to purchase a machine for doing this work. This will materially reduce the cost and will do the work in a more sanitary and satisfactory manner.

Fallen leaves form one of the principal trials of this Bureau. In addition to those picked up in the regular work, about 3500 yards of leaves were removed from the streets. A great many of these leaves are swept into the streets, from the yards and sidewalks, by the citizens. This practice should be stopped, for, in many instances, this is done immediately after we have flushed the street. This, of course, tends to make the street look very untidy and as if it had not been cleaned. In speaking of the leaves, I wish also to call your attention to the shade trees located in the parking strips. In many places, in the flushing districts, the overhanging branches are so low that it is impossible for our rigs to go in close enough to the curb to properly clean the street. These trees should be trimmed to a certain height and branches not permitted lower.

The Bureau confined its sanding operations to the approaches to the Willamette River bridges, and for the Rose Festival parade, but owing to weather conditions it was not found necessary to do much of this work.

The Bureau also aided in the Spring Clean-up Campaign. This, in addition to a special appropriation, cost the Bureau approximately $1,000.00.

During the first of the year just passed, the City experienced the heaviest snowfall in years. Special appropriations were allowed for removing the snow and keeping the streets open. In addition to this, the Bureau spent $18,431 of the regular appropriation, and in so doing removed over 30,000 cubic yards of snow. Credit should also be extended to the Bureau of Parks and Department of Public Affairs for their assistance in this work.

As in past years, the Bureau is still experiencing considerable trouble with grading contractors, who persist in littering streets with mud; and also with the citizens who will not clean up the sawdust after their fuel deliveries. The grading contractors should be compelled to clean the wheels of their wagons thoroughly, and should not be allowed to load so heavily that the dirt will roll off the top. In many cases the sawdust from wood deliveries is left on the street until it gradually washes from the gutter into the catch-basin, or is scattered over the street and is so mixed with other debris that we are compelled to haul it away. We also have some trouble with building contractors, who, when they are through with a contract, do not clean up the street,

but leave it littered with cement, lime, gravel, etc., which we have to to haul away.

Some method should be devised for taking care of the old and crippled employes of the Bureau, who have worked for the city for fifteen or twenty years, and are now not able to work at all, or are unable to do a full day's work. I would recommend that the Bureau be placed under the State Workman's Compensation Act, or in lieu of this a pension and accident benefit system might be devised. It costs the City considerable every year to reimburse employes who have been injured in service, and, I think, by increasing this amount a little and requiring the employe to contribute a small amount, that the injured could be cared for and a pension allowed those who have given the best of their life to the City's service and are now unable to perform manual labor.

Following is a statement of the number of officers and employes necessary for the operation of the Bureau during the past year:

1 Superintendent
1 Clerk
3 District Superintendents
2 Foremen
1 Assistant Foreman
1 Shop Foreman
2 Repairmen
1 Broommaker
1 Horseshoer
9 Hostlers
8 Truck Drivers
173 Laborers (average)

Following is a statement of the equipment in operation by this bureau:

120 Horses
9 Horse-drawn Street Sweepers
3 Horse-drawn Street Sprinklers
48 Horse-drawn Dump Carts
2 Horse-drawn Squeegee Street Washers
11 Horse-drawn Street Flushers
1 Horse-drawn Street Sander
1 Motor-driven Street Sweeper
3 Motor-driven Street Flushers
2 Five-ton Auto Trucks
1 Three-ton Auto Truck
1 Five-passenger Maxwell Touring Car
2 Two-passenger Ford Roadsters

Following statement shows the appropriation and expenditure, for operating the bureau, for the year ending November 30, 1916:

	Appropriation	Expenditure	Balance
Personal Service	$195,579.00	$192,915.19	$2,663.81
Equipment, Supplies, Material, etc...	62,645.77	56,758.73	5,887.04
Total	$258,224.77	$249,673.92	$8,550.85

The tabulated statement attached shows the amount of work performed, unit costs, etc.

Respectfully submitted,

ALEX DONALDSON,

Superintendent, Bureau of Street Cleaning.

WORK PERFORMED, UNIT COSTS, ETC., OF BUREAU OF STREET CLEANING FOR FISCAL YEAR ENDING NOVEMBER 30, 1916.

	No. Miles Cleaned	No. Sq. Yds. Cleaned	No. Cu. Yds Refuse Removed	Total Cost	Cost Per Mile Cleaned	Cost per 1000 Sq. Yds Cleaned
Horse Machine Sweeping	8,925	185,640,000	15,503	$ 68,805.19	$ 7.71	$ .37
Automobile Sweeping	737	15,330,000	1,612	5,827.67	7.90	.38
Patrol Sweeping	1,908	39,687,000	1,489	13,325.17	6.98	.335
Hand Sweeping	894	18,595,000	1,545	6,625.67	7.41	.356
Squeegee Sweeping	1,561	32,469,000	1,263	6,645.11	4.25	.204
Horse Machine Flushing	9,857	205,026,000	5,179	60,365.22	6.12	.294
Automobile Flushing	4,418	91,895,000	3,822	22,314.87	5.05	.243
Macadam and Gravel	234	4,867,000	6,160	12,760.27	54.52	2.622
MISCELLANEOUS	No. Cleaned				Cost Each	
Crosswalk Sweeping	154,858	.....	317	4,565.77	$ 0.029	.....
Catchbasin Cleaning	63,698	.....	5,089	11,546.71	.18	.....
Leaves Removed	.....	.....	3,547	2,992.70	.....	.....
Snow	.....	.....	30,363	18,431.45	.....	.....
Clean-up Campaign	.....	.....	.....	1,046.47	.....	.....
	No. Blocks					
Sanding Streets	110	.....	.....	80.18	.73	.....
	No. Miles Var. Widths	No. Miles 6 ft. Wide			Cost per Mile 6 ft. Wide	
Oiling Streets	121.05	545.45	.....	9,351.73	$ 17.14	.....

MUNICIPAL LIGHTING.

LIGHTING RECEIPTS AND EXPENDITURES

Appropriation (Ordinance 31178)	$203,000.00
Sale of Material	62.12
Total	$203,062.12
Total Expenditures	194,148.44
Balance	$ 8,913.68

DETAILED EXPENDITURES

Arc Lighting	$173,228.02
Linnton	3,348.00
St. Johns	6,966.00
Pittsburg Street	8.93
Patrol Service	21.44
East 28th Street Bridge	204.40
East 12th Street Bridge	130.29½
East 21st Street Bridge	142.56½
Grand Avenue Bridge	178.20¾
Union Avenue Bridge	176.70¼
Street Cleaning	609.80
Police Department	21.69
Crematory	40.76
Purchasing Department	226.43
City Hall Building	1,495.55
Comfort Station	178.73
City Jail	2,321.07
Park Board	2,013.14
Municipal Free Employment Bureau	24.48
Fire Department	1,629.84
Public Market	55.73
Decorative Lighting	1,109.09
Municipal Shop	16.61
Municipal Lodging House	.96
Total	$194,148.44

LIGHTS IN SERVICE NOV. 30, 1916

Overhead arcs, December 1, 1915	3,392
Overhead arcs installed	4
Total overhead arcs	3,396
Total underground arcs	157
Total incandescent lights, 100 watts	93

POLE ELIMINATION.

Satisfying progress has been made during the year in the elimination of unnecessary wooden poles from the public streets. At the beginning of the present Commission government administration, the Commissioner of Public Utilities called attention of the various utility companies maintaining the unsightly nuisance caused by the installation of thousands of useless telephone, telegraph, electric light and other poles.

Representatives of the leading companies were called in conference and were convinced by the Commissioner that the formation of a joint pole committee would be the solution of the problem from all angles.

With this object in view, a number of meetings were held by company officials and in April, 1914, an agreement was entered into by the Portland Railway, Light & Power Company, the Northwestern Electric Company, the Pacific Telephone & Telegraph Company and The Home Telephone Company whereby each company bound itself to the principle of joint usage of poles.

Under this agreement one pole is made to do the work formerly required of three, four and even six.

The Joint Pole Committee now has a permanent secretary and office. Meetings are held regularly and all proposed pole construction by the various utility companies must be submitted to the Committee for its approval.

Since the first agreement was signed by the four companies heretofore mentioned, the following other companies, including all that have use for poles, have entered the compact: Western Union Telegraph Company, Postal Telegraph Company, Oregon Electric Railway Company, United Railways Company, Southern Pacific Company and American District Telegraph Company.

The first annual report of the Joint Pole Committee, issued in December, 1915, stated that arrangements had been made for the joint use of 3,071 poles. Since then 2,029 more joint user agreements have been filed, making a total of 5,100 for the two years.

ANNUAL REPORT, BUREAU OF GARBAGE DISPOSAL, 1916

Hon. Will H. Daly, Commissioner of Public Utilities.

Dear Sir: I respectfully submit to you the annual report of the Bureau of Garbage Disposal for the fiscal year of 1916:

TOTAL AMOUNT INCINERATED

	Tons
Garbage	38,112½
Manure	47¾
Trash	4,944¾
Total	43,105

PERCENTAGE OF EACH CLASS OF REFUSE INCINERATED

Garbage	88½%
Manure	
Trash	11½%
Average amount of refuse incinerated per day, tons.	138⅛

ANIMALS INCINERATED

Horses	9
Cows	16
Dogs	1,240
Hogs	2
Goats	1
Calves	13
Colts	2
Bear	2
Elk	1
Total	1,286
Number of loads received from scavengers	32,030
Number of loads received from private teams	1,834
Total number of loads received	33,864
Average number of loads received per day	108½
Average weight per load, lbs.	2,546
Percentage delivery from scavengers	94½%
Percentage delivery from private teams	5½%

COST OF INCINERATION PER TON

Labor	$ .33
Supplies and repairs	.01¼
Total	$ .34¼

OPERATING EXPENSE OF THE INCINERATOR

Salaries	$14,269.57
Supplies and repairs	542.81
Total	$14,812.38

MAINTENANCE OF DUMP AND GROUND

Salaries	$ 5,683.25
Supplies	151.43
Total	$ 5,834.68

40,000 fire bricks purchased out of the 1916 appropriation for relining the furnace next year	$ 1,805.00
Expense of Incinerator	$14,812.36
Expense of Dump and Ground	5,834.70
Expense of Fire Bricks	1,805.00
Complete total	$22,452.06.

STATEMENT OF APPROPRIATION AND EXPENDITURES

Appropriation including transfers	$23,223.00
Total incumbrance	22,452.06
Unincumbered balance	770.94

Of the total cost of the operating expense of the incinerator, salaries called for 96¼ per cent; furnace repairs, 2 per cent; plant supplies, 1 per cent; tool repairing, ¾ per cent.

Number of men employed in operation of the Incinerator	13
Number of men employed in maintenance of ground and dump (Maintenance of team and watchman is charged to ground and dump)	6
Total	19
Number of employes appointed	1
Number of employes resigned	1
Number of employes discharged	None
Temporary employes on payroll	None
Employes injured while on duty	None

Absent on sick leave, H. W. Sherrett, three months.
Absent on sick leave, James F. Barnes, four months.

Respectfully submitted,

WM. G. HELBER,
.General Foreman.

PERSONAL SERVICE

	Incinerator	Dump and Ground	Total
December	$ 1,238.00	$ 502.75	$ 1,740.75
January	1,202.50	475.75	1,678.25
February	1,180.00	460.25	1,640.25
March	1,238.00	505.75	1,743.75
April	1,180.00	472.50	1,652.50
May	1,228.25	505.75	1,734.00
June	1,124.50	484.50	1,609.00
July	1,234.47	424.75	1,659.22
August	1,202.18	412.75	1,614.93
September	1,196.00	475.50	1,671.50
October	1,124.50	483.00	1,607.50
November	1,121.17	480.00	1,601.17
	14,269.57	5,683.25	19,952.82

TOTAL AMOUNT INCINERATED

	Garbage Tons	Manure Tons	Trash Tons	Total Tons
December	3,234½	5	491¾	3,731¼
January	2,552¾	8½	315¼	2,876½
February	2,568¾	4¾	539¾	3,113¼
March	3,143½	12½	509¼	3,665¼
April	2,944½	3½	438¼	3,386¼
May	3,314¾	4½	461¼	3,780½
June	3,363½	5¼	432	3,800¾
July	3,354	3¾	346¼	3,704
August	3,564¾	.....	411¾	3,976½
September	3,728½	.....	382¼	4,110¾
October	3,276¾	.....	316¾	3,593½
November	3,066¼	.....	300¼	3,366½
	38,112½	47¾	4,944¾	43,105

NUMBER OF LOADS RECEIVED

	Scavengers	Private Teams	Total
December	2,700	161	2,861
January	2,186	168	2,354
February	2,365	193	2,558
March	2,812	172	2,984
April	2,603	156	2,759
May	2,895	170	3,065
June	2,913	168	3,081
July	2,754	141	2,895
August	2,781	169	2,950
September	2,741	121	2,862
October	2,625	120	2,745
November	2,655	95	2,750
	32,030	1,834	33,864

OPERATING EXPENSE OF INCINERATOR

	Salaries	Supplies and Repairs	Total
December	$ 1,238.00	$ 88.31	$ 1,326.31
January	1,202.50	13.32	1,215.82
February	1,180.00	27.52	1,207.52
March	1,238.00	114.87	1,352.87
April	1,180.00	12.16	1,192.16
May	1,228.25	17.42	1,245.67
June	1,124.00	44.52	1,169.02
July	1,234.47	15.48	1,249.95
August	1,202.18	6.85	1,209.03
September	1,196.00	43.89	1,239.89
October	1,124.50	113.48	1,237.98
November	1,121.17	1,849.99	2,971.16
	14,269.57	2,347.81	16,617.38

COST OF MAINTENANCE OF DUMP AND GROUND

	Salaries	Supplies	Total
December	$ 502.75	$ 2.50	$ 505.25
January	475.75	49.98	525.73
February	460.25	.....	460.25
March	505.75	12.35	518.10
April	472.50	5.56	478.06
May	505.75	.....	505.75
June	484.50	6.13	490.63
July	424.75	.....	424.75
August	412.75	2.53	415.28
September	475.50	37.60	513.10
October	483.00	.....	483.00
November	480.00	34.78	514.78
	$ 5,683.25	$ 151.43	$ 5,834.68

NUMBER OF ANIMALS INCINERATED

	Horses	Cows	Dogs	Hogs	Goats	Calves	Colts	Bear	Elk
December	1	1	79	1	1	.....	.....	.....	.....
January	1	15	84	.....	.....	1	.....	.....	.....
February	2	.....	64	.....	.....	2	1	.....	.....
March	.....	.....	91	.....	.....	.....	.....	1	.....
April	1	.....	99	.....	.....	1	.....	.....	.....
May	1	.....	82	.....	.....	1	.....	.....	.....
June	.....	.....	92	.....	.....	1	.....	.....	1
July	.....	.....	194	.....	.....	2	.....	.....	.....
August	.....	.....	207	.....	.....	1	1	.....	.....
September	1	.....	54	1	.....	.....	.....	1	.....
October	1	.....	90	.....	.....	3	.....	.....	.....
November	1	.....	104	.....	.....	1	.....	.....	.....
	9	16	1240	2	1	13	2	2	1

Total animals 1,268

READING OF LIGHTING AND POWER METERS

	Lighting Meter	Power Meter		
December	249 K. W. consumed	40 K. W. H	Minimum charge	$ 5.50
January	206 K. W. consumed	20 K. W. H	Minimum charge	5.50
February	178 K. W. consumed	40 K. W. H	Minimum charge	5.50
March	178 K. W. consumed	20 K. W. H	Minimum charge	5.50
April	133 K. W. consumed	00 K. W. H	Minimum charge	5.50
May	133 K. W. consumed	00 K. W. H	Minimum charge	5.50
June	93 K. W. consumed	00 K. W. H	Minimum charge	5.50
July	110 K. W. consumed	70 K. W. H	Minimum charge	5.50
August	127 K. W. consumed	20 K. W. H	Minimum charge	5.50
September	135 K. W. consumed	140 K. W. H	Minimum charge	5.50
October	150 K. W. consumed	10 K. W. H	Minimum charge	5.50
November	122 K. W. consumed	20 K. W. H	Minimum charge	5.50
	1814 K. W. consumed			$70.30

EXPENSE OF REPAIRING FURNACE TOOLS

December	$.....
January	2.97
February	3.61
March	.....
April	6.66
May	.....
June	8.20
July	8.80
August	.....
September	3.73
October	6.95
November	11.71
Total	$ 51.63

PURCHASE OF SUPPLIES—INCINERATOR

Name of Article	Number of pieces	Total cost
Office supplies	.....	$ 7.04
Engine oil	55 gals.	11.89
Coal oil	10 gals.	1.62
Floor brushes	½ Doz.	9.26
Mazda lamps	5 Doz.	13.36
Arc lamp carbons	1 Doz.	2.41
Street brooms	1 Doz.	17.28
		$ 62.86

MATERIAL

Name of Article	Number of pieces	Total cost
Fire brick (imported bull head)	2,000	$ 95.00
Fire brick, Gart Craig squares	32,000	1,520.00
Fire bricks, Crown, side arch	2,000	95.00
Fire bricks, Snowballs, end wedge	2,000	95.00
Fire bricks, Soaps, end wedge	4,000	95.00
Fire bricks, Domestic, squares	2,000	75.00
Fire bricks, Domestic, soaps	250	10.63
Fire bricks, Domestic, splits	250	10.63
Fire bricks, Domestic, side arch		9.75
Fire clay	1,998 lbs.	12.99
Cement	3 bls.	6.75
Damper screen	1 pc.	9.50
		$ 2,035.25

EQUIPMENT

Name of Article	Number of pieces	Total cost
Overhead trolleys	4 sets	$ 63.00
Hose, 1-inch	50 ft.	10.14
Hose, ¾-inch (steam hose)	20 ft.	7.47
Shovels	1 doz.	8.21
Garbage hooks (fourt tine)	1 doz.	11.47
Garbage hook handles	1 doz.	3.82
Cros cut saw (five-foot)	1 pc.	2.46
Steel slice bar	1 pc.	9.20
		$ 115.77

CAR FARE

Name of Article	Number of pieces	Total cost
Car tickets	11 books	$ 11.00
Complete Total		$2,224.88

SUPPLIES FOR DUMP AND GROUND

Name of Article	Number of pieces	Total cost
Hay	8,295 lbs.	$ 75.72
Oats	990 lbs.	15.79
Bran	250 lbs.	3.42
Seeds (lawn seed)	10 lbs.	3.48
Horse shoeing (material and labor)	3 sets	8.90
Sewer pipes, 8-inch	50 ft.	8.82
Railway spikes	1 keg	8.53
Galvanized iron pipe, 1-inch	18½ ft.	3.11
Pipe fittings	250	2.53
Hose, ¾-inch	50 ft.	6.13
Lease of ground	1 years' rent	15.00
Total		$ 151.43

STATEMENT SHOWING CONDITION OF APPROPRIATION FOR THE FISCAL YEAR ENDING NOVEMBER 30, 1916

	Total Appropriation including Transfers	Total Incumbrance	Unincumbered Balance
Personal Service	$ 20,168.00	$ 19,952.82	$ 215.18
Supplies	215.00	161.27	53.73
Material	2,300.00	2,058.24	241.76
Equipment	210.00	121.90	88.10
Repairs	100.00	52.63	47.37
Heat, Light and Power	100.00	70.30	29.70
Transportation and Communication	80.00	19.90	60.10
Contingencies	50.00	15.00	35.00
	$ 23,223.00	$ 22,452.06	$ 700.94

MOTOR BUS INSPECTION AND REGULATION.

Honorable Will H. Daly, Commissioner of Public Utilities, Portland, Oregon.

Dear Sir: I submit herewith report on the inspection and regulation of Motor Busses and For-Hire cars for the year 1916. (From January 1 to November 15.)

Motor Bus Ordinance No. 30849, effective January 1, 1916, requiring registration and examination of drivers and machines.

MOTOR BUS INSPECTION

Monthly inspection of machines started March 1, 1916.

Average number of machines started March 1, 1916		325
Total number of inspections to Nov. 15, not including For-Hire cars		5,704
Machines inspected and approved for license (city)	797	
Machines inspected and approved for license (interurban)	29	
Machines inspected and rejected	45	
Total inspection on application for license		863
Machines passing first inspection	225	
Machines on which repairs were required	638	
Total		863
Applications approved for chauffeur's permits	979	
Applications rejected for chauffeur's permits	17	
Total applications for chauffeur's permits		986
Number of machines ordered repaired on monthly inspection		493
Number of licenses revoked for failure to have cars examined		24
Number of chauffeur's permits revoked for violation of ordinance		8
Number of cars discontinuing business rather than make repairs		1

AVERAGE NUMBER OF MOTOR BUSSES OPERATING IN CITY LIMITS

Route		Route	
Twenty-third Street	81	Mississippi Avenue	23
Belmont	48	Linnton	17
South Portland	38	Broadway	4
Hawthorne	30	St. Johns	2
Division	21	Rose City	4
Alberta	43		
Williams Avenue	16	Total	327

INTERURBAN MACHINES OPERATED AS FOLLOWS

Columbia Highway	2	West Portland	3
Gresham	6	Newberg Stage	1
Sandy Stage	2	Pioneer Stage	1
Scholes Ferry Stage	2	St. Helens Stage	2
Tigard Stage	2	Vancouver Stage	3
Mt. Hood Stage	4		
Hillsboro Stage	1	Total	29

FOR-HIRE VEHICLES AUG. 19 TO DEC. 31, 1916

Taxicab Ordinance No. 31934, effective August 19, 1916, requiring the registration and licensing of all Taxicabs and For-Hire cars.

Machines approved for license	377	
Machines rejected	6	
Total applications		383
Machines passed first inspection	312	
Machines requiring repairs	65	
Machines rejected	6	
Total inspections on application for license		383
Average number of machines inspected per month		217
Total inspections including motor busses after No. 15, 1917		977
Machines on which repairs were required		98
Chauffeur's permits issued	425	
Chauffeur's permits refused	3	
Total applications		428
Number of car license suspensions on account of failure to have cars inspected		48

The small percentage of cars on which repairs were necessary under this ordinance was due to the better class of cars in this line of business. This does not include jitneys from September 1 to November 15, which are included in the Motor Bus report above. The Motor Bus ordinance became inoperative November 15, and a large number of cars working under this ordinance took out a license under the For-Hire ordinance.

Respectfully submitted,

RAYMOND GILL,
Motor Bus Inspector.

ANNUAL REPORT

OF

THE DEPARTMENT OF FINANCE

FOR THE FISCAL YEAR ENDING
NOVEMBER 30, 1916

DEPARTMENT OF FINANCE

C. A. BIGELOW
COMMISSIONER

BUREAU OF PURCHASES—
J. R. WOOD, Purchasing Agent

OFFICE OF CITY TREASURER—
WM. ADAMS, City Treasurer

BUREAU OF PUBLIC MARKETS—
J. A. EASTMAN, Market Master

BUREAU OF LICENSES—
J. S. HUTCHINSON, Inspector of Licenses

ANNUAL REPORT OF BUREAU OF PURCHASES FOR YEAR 1916

During the year 1916, the Bureau of Purchases was constantly confronted with a rising market. Fortunately, the City was protected on practically every commodity by contracts running until the end of the year. One example might be cited. The City paid 9½ cents per gallon for gasoline until October 1, 1916, while the market was near 20 cents per gallon.

The City operates a Municipal Garage, which is under the direction of the Purchasing Agent. A few facts in regard to its operation may be of interest.

In regard to the care of automobiles in public garages about town, we find the prevailing charge for live storage to be $25.00 per month; dead storage, $7.50 per month. By live storage is meant, besides storage of the car, a wash whenever needed, greasing and oiling (material not included) and keeping filled with gasoline and oil, if owner assumes responsibility. No minor repairs or adjustments of any kind are included. Dead storage includes the stall only.

In the Municipal Garage, maintained by the City of Portland, the City cars receive, besides the washing, oiling and greasing included in outside live storage, tire service, tube repair, cleaning motors, cleaning carbon from cylinders, regrinding valves, and a weekly inspection to find any loose nuts or bolts, and bearings and bushings that may need adjusting, in fact, trouble of any kind outside of a general overhauling which would be taken care of at the Municipal Shop. Recharging of batteries is also handled at the Garage.

Against the charge of $25.00 per month then, asked by public garages, for a very much less service, we may compare the cost per car at the Municipal Garage of $13.00 per month. This includes the service mentioned above, but does not include cost of supplies, as gasoline, lubricating oil, grease, etc.

Even a greater saving is accomplished by purchasing all supplies and materials used on the City cars through the Bureau of Purchases. Supplies are thus furnished the cars at jobbers' prices, whereas, if the cars were distributed about town in the several public garages, as was formerly the case, retail prices would be paid for all supplies and materials purchased. For example, a fibre gear for Speedometer —of which many are used—sells at garage for 35 cents each, for which the City pays 20 cents each for them.

Lubricating Oil—City price.....	30c gallon
Lubricating Oil—Retail price.....	80c gallon
Gasoline—City price	18½c gallon
Gasoline—Retail price	21½c gallon

Tires would cost 35 per cent more if purchased at public garages than as now purchased through the Bureau of Purchases.

Example: 30x3½—Consumers' price.....	$19.74
City Price	$13.00

The amount saved in one year will be about $1,200.00 on tires alone.

Another advantage of a central garage run by the City is the control it offers. Responsibility is placed at once for the care of the cars and all wrongs are quickly and easily righted.

The Bureau of Purchases has endeavored to maintain the same standard of purchasing throughout the year, that is, no favored vendors, but an opportunity for all to obtain the business, provided prices and quality were right.

J. R. WOOD,
Purchasing Agent.

ANNUAL REPORT OF WM. ADAMS, CITY TREASURER, FOR YEAR ENDING NOVEMBER 30, 1916

Balance in Treasury Nov. 30, 1915	$1,367,752.43	$.....
Balance in New York	8,679.78	.....
Received from all sources	7,839,663.20	.....
Disbursed	.....	6,897,715.73
Balance in Treasury	.....	2,296,283.95
Balance in New York	.....	22,095.73
	$9,216,095.41	$9,216,095.41

GENERAL FUND

Balance per report Nov. 30, 1915	.....	$ 555,233.27
(Credited as follows):		
Receipts—		
Building permits	.....	11,567.85
General licenses	.....	65,896.07
Dog licenses	.....	11,006.00
Milk and cream licenses	.....	2,149.50
Vehicle licenses	.....	15,735.95
Fines, Municipal Court	.....	35,691.50
Public market	.....	7,525.75
Motor bus licenses	.....	7,440.47
Plumbing permits	.....	1,948.50
Sidewalk permits	.....	1,135.98
Prints	.....	429.77
Pound fees	.....	1,211.45
Repair sidewalks and curbs	.....	9,970.89
Certified copies	.....	99.30
Solicitors and runners' badges	.....	63.00
Interest on daily balances	.....	7,319.92
Weeds, nuisance, etc.	.....	218.94
Electric building and plumbing codes	.....	77.50
Birth and death certificates	.....	161.00
City charters	.....	14.40
Driveway permits	.....	55.50
Wood sold	.....	25,253.87
Registration of electric contractors	.....	2,000.00
Proportionate cost Ochoco Bridge	.....	129.21
Use of laboratory	.....	20.50
Franche O.-W. R. & N. Co.	.....	263.00
Franchise Southern Pacific Co.	.....	2,500.00
Franchise Portland Gas & Coke Co., St. Johns	.....	100.00
Franchise Northwestern Electric Co.	.....	12,602.83
Franchise Pacific Tel. & Tel. Co.	.....	1,000.00
Franchise Central Heating Co.	.....	50.00
Franchise Errol Hts. Ry. Co.	.....	73.40
Franchise Portland Central Heating Co.	.....	5.00
Franchise Portland Ry., Light & Power Co. (Ordinance No. 24029)	.....	60.00
Franchise Portland Ry., Light & Power Co.	.....	12,023.00
Franchise Oregon Electric Co.	.....	1,285.00
Franchise Spokane, Portland & Seattle Ry. Co.	.....	500.00
Franchise United Railway Co.	.....	623.40
Franchise Home Tel. & Tel. Co.	.....	3,018.52
Rental Jefferson Street Levee	.....	4,170.79
Judgment Home Telephone Co.	.....	500.00
Spokane, Portland & Seattle Ry. Co. (Use of Streets)	.....	25.00
Heights Trust Co., Ord. No. 21735	.....	65.00
Refund Honeyman or meals	.....	.10
Filling sewer trench	.....	27.23
Tests	.....	371.67
Taxes, St. Johns	.....	1,440.34

GENERAL FUND—Continued

Taxes, Linnton		$ 686.55
Spokane, Portland & Seattle Ry. Co.		223.20
Flushing sewers		6.00
Rock dressing, Taylor Ferry road		8.00
Commission of Public Docks, etc.		525.63
Refund insurance		467.95
Rolling		868.64
Making sewer connections		23.24
Repairing cuts		7.96
Jitney tags and badges		27.00
Use of hose		6.00
Survey work		14.60
Samples of pavement		5.00
Signs		75.88
Miscellaneous costs		2,158.70
Damage to cart		16.25
Appeal Building Inspector		50.00
Library Assn., storage, oil, etc.		159.36
Sacks sold		2,273.20
Damage to Ford auto		19.97
Refund overcharge on paper		.72
Anti-toxine sold		74.10
Blankets, Emergency Hospital		4.50
Sale of street sweepers		154.00
Sale of guinea pigs		30.75
Towells-Lester Machine Co.		4.80
Sales, J. R. Wood		1,904.25
Sale flushing wagons		100.00
Sale autos		663.00
Sale sprinkling wagons		88.50
Photographs		.93
Taxes, John M. Lewis Co., treasurer		1,853,254.11
Taxes, sundry years		186.84
Comfort station		92.82
Labor and material, municipal shops		51.53
Billboards		14.50
Interest on street extensions		219.83
Electric inspection		5.50
Checks not cashed		.20
Removing drag sook		5.98
Repairing private sewer, J. N. Wood		5.00
Repairing catch basin, Corbett Estate		29.05
Damage to hydrant		65.49
Moving tool box		6.97
Forfeit, Cowlitz Bridge Co.		10.00
Warrants held by city		13,210.61
Right of way		25.00
Phone commission		7.59
Repair stone pavement		75.22
Contractors penalties		30.00
Sale of boiler		20.00
Rental, Morrison Bridge		13,293.69
Burnside Bridge, rental		5,693.43
Broadway Bridge, rental		10,290.27
Hawthorne Avenue Bridge, rental		20,266.02
Insurance loss on wood		14.57
Interest on warrants held by city		6,555.08
Labor on sewer		31.63
Removing dirt, Susan W. Smith		12.50
Repair to autos		91.57
Damage to flusher		59.34
Cutting fire alarm wires		9.75
Refund E. Cramer		4.25
Redemption of property		532.12
Costs, engineering, etc.		72,469.89
Premium on bonds		26,274.55
Rents		250.00

GENERAL FUND—Continued

Costs, W. P. LaRoche, city attorney	.....	$ 24.31
City monument covers	.....	7.84
Refund, water pails	.....	.80
Refund Apperson auto parts	.....	3.26
Supplies, Firemen's Relief & Pension Fund	.....	17.58
Fines and costs, Circuit Court	.....	704.93
Compromise, improvement Edgewater Street	.....	1,250.00
Re-advertised E. 80th Street	.....	4.03
Repair to bridge	.....	87.23
Refund expressage	.....	.25
Junk, M. Barde	.....	50.20
Sale scrap iron	.....	37.00
Globes for bridges	.....	88.37
Sale of rock, P. R., L. & P. Co.	.....	45.20
Refund, C. A. Catching	.....	1.00
War Stamps	.....	.20
Special deposit	.....	105,000.00
Concession, Sellwood Park	.....	200.00
Concession, Washington Park	.....	1,150.00
Concession, Columbia Park	.....	175.00
Rock dressing	.....	11.15
Penalties on streets	.....	454.77
Inspecting sewer, 18th and Upshur St.	.....	15.64
Witness fees, H. M. Moody	.....	2.00
Witness fees, J. J. Curtin	.....	2.10
Witness fees, C. D. Jameson	.....	3.20
Witness fees, F. S. Peirce	.....	4.35
Witness fees, E. W. Jones	.....	2.20
Witness fees, W. D. Smith	.....	2.10
Witness fees, Pearl Barkhurst	.....	8.00
Witness fees, A. L. Barbur	.....	2.10
Witness fees, C. A. Bigelow	.....	4.20
Witness fees, W. H. Daly	.....	2.10
Witness fees, R. C. Dieck	.....	2.10
Witness fees, H. R. Albee	.....	2.10
Witness fees, L. E. Burdick	.....	2.10
Witness fees, Geo. L. Baker	.....	2.20
Benefit from street opening	.....	10.00
Storage, J. R. Wood	.....	.50
Repairs to transit	.....	30.75
Spraying trees	.....	5.00
Repairs to curb	.....	13.48
East Side Mill & Fixture Co., Ord. No. 29360	.....	50.00
Sale split pile heads	.....	6.00
Refund Ladd Estate Co., Forestry Bldg. fence	.....	200.00
Tree surgery	.....	18.75
Removing obstructions in private sewers	.....	30.88
Repair semaphore	.....	1.06
Construction of runway	.....	10.00
Refund expressage on plants	.....	2.06
Franchise, Mt. Hood Ry. & P. Co., Ord. 31678	.....	1,000.00
Grading permits	.....	2.50
Repair catch basins	.....	45.89
Repair Ford car	.....	26.29
Refund Oregon Humane Society	.....	4,000.00
Frames and supports	.....	6.86
Transferred from—		
Street Extension Fund	.....	17,393.97
1916 Tax Fund	.....	1,681.25
Special Bridge Fund	.....	1,394.05
Public Auditorium Fund	.....	983.84
Water Fund	.....	7,237.90
Street Improvement Fund	.....	4,585.64
Sewer Fund	.....	220.22
Stark Street Extension Fund	.....	38.59
Redemption Fund	.....	1.39
Bonded Ind. Int. Fund	.....	2,200.00

GENERAL FUND—Continued

Transferred to—		
Street Improvement Fund	$ 66.10	
Sewer Fund	47.25	
Imp. Bond Sinking Fund	245.07	
Imp. Bond Interest Fund	128,101.61	
Water Fund	2,543.69	
Bonded Ind. Int. Fund	2,200.00	
Street and Sewer Int. Fund	2,500.00	
Redemption Fund	1.40	
Special Bridge Fund	81.44	
Crematory Bonds redeemed and returned	10,800.00	
Crematory Bond Int. Coupons redeemed and returned	3,135.00	
Badges redeemed and returned	89.00	
Warrants paid and return	2,526,011.96	
Balance	311,613.87	
	$2,987,436.40	$2,987.436.40

WATER FUND

Balance per report Nov. 30, 1915		$ 136,175.68
Receipts—		
Collections, use of water		764.116.45
Bonds sold, $125,000 at .99257		124,071.25
Interest on Daily Balances		4,078.36
Refund Standard Oil Company		12.47
Refund		3.67
Transferred from—		
General Fund		2,543.69
Bonded Indebtedness Interest Fund		120.00
Water Main Fund		4,989.68
Receipts—		
Protecting mains		82.10
Sale St. Johns water plant		1,052.00
Repair of Meters		211.20
Shutting off water		5.75
Sale of iron		114.99
Use of water, St. Johns		387.45
Inspecting mains		236.93
Sale of sacks		93.40
Installing mains		43.58
Removing mains		880.45
Service on hydrant		25.50
Witness fees		7.00
Materials		1.75
Testing pipe		1.00
Rents		125.00
Valve		80.00
Operating gas pump		8.95
Sale of horse		76.00
Gates and hydrant		24.25
Transferred to—		
General Fund	$ 7,237.90	
National Park Bank, Linnton, Water	8,250.00	
Chase National Bank	3,000.00	
Harris-Forbes & Company	12,000.00	
Water Bond Interest Coupons Paid and Ret'd	302,255.00	
Warrants Paid and Returned	575,532.50	
Balance	131,293.13	
	$1,039.568.53	$1,039,568.53

BONDED INDEBTEDNESS INTEREST FUND

Balance per report of November 30, 1915		$105,193.65
Received taxes, John M. Lewis, Co. Treasurer		314,202.61
Received Refund on Coupons		60.00
Received Int. on Auditorium Bonds, $565,000 at 4%, 13 days		816.11
Transferred from 1916 Tax Fund		284.05
Transferred from General Fund		2,200.00
Transferred from Special Bridge Fund		2.42
Transferred to General Fund	$ 2,200.00	
Transferred to Chemical National Bank	33,400.00	
Transferred to Hanover National Bank	180.00	
Transferred to Harris-Forbes & Co.	3,000.00	
Transferred to Water Fund	120.00	
Interest Coupons Paid and Returned	291,282.50	
Warrants Paid and Returned	118.00	
Balance	92,458.34	
	$422,758.84	$422,758.84

BONDED INDEBTEDNESS INTEREST FUND NEW YORK ACCOUNT

Balance Chase National Bank, Nov. 30, 1915		$ 90.00
Balance Harris-Forbes & Co.		570.00
Balance Chemical National Bank		4,475.00
Balance Hanover National Bank		180.00
Transferred to Chase National Bank		3,000.00
Transferred to Harris-Forbes & Co.		15,000.00
Transferred to Chemical National Bank		33,400.00
Transferred to Hanover National Bank		180.00
Interest Coupons paid Chase National Bank	$ 3,000.00	
Interest Coupons paid Harris-Forbes & Co.	8,010.00	
Interest Coupons paid Chemical Natl. Bank	33,575.00	
Balance Harris-Forbes & Co.	7,560.00	
Balance Chemical National Bank	4,300.00	
Balance Hanover National Bank	360.00	
	$56,895.00	$56,895.00

IMPROVEMENT BOND SINKING FUND

Balance per report of November 30, 1915		$ 200,382.06
Received Assessments		1,528,765.69
Received Collections, Sale of Bonds		34.60
Transferred from Improvement Bond Int. Fund.		289.48
Transferred from Street Improvement Fund		830.28
Transferred from General Fund		245.07
Bonds Redeemed and Returned	$1,239,537.40	
Transferred to Improved Bonds Fund, St. Johns	6.53	
Warrants Paid and Returned	1,899.73	
Balance	489,103.52	
	$1,730,547.18	$1,730,547.18

IMPROVEMENT BOND INTEREST FUND

Balance per report of November 30, 1915		$ 9,753.58
Received Interest on Assessments		675,219.64
Received Penalties		1,335.15
Received Cash Coupons Returned		45.00
Received Interest on Daily Balances		6,081.76
Received Interest on C D $140,737.55 at 3½%, 6 months		2,462.90
Received Interest on C D $100,000.00 at 3%, 6 months		1,500.00
Transferred from Improvement Bond Int. Fund, St. Johns		1,762.14
Transferred from General Fund		128,101.61
Transferred to National Park Bank	$ 14,793.45	
Transferred to Redemption Fund	28.25	
Transferred to Improvement Bond S. Fund	289.48	
Warrants Paid and Returned	980.60	
Interest Coupons paid and returned	808,189.41	
Balance	1,980.59	
	$826,261.78	$828,261.78

LIBRARY FUND

Balance per report of November 30, 1915		$ 9.54
Received Taxes, John M. Lewis, Co. Treasurer		6.74
Balance	$ 16.28	
	$ 16.28	$ 16.28

NATIONAL PARK BANK IMPROVEMENT BOND INTEREST ACCOUNT

Balance per report November 30, 1915		$ 2,367.28
Transferred from Improvement Bond Int. Fund		14,523.45
Coupons Paid and Returned	$ 10,095.00	
Balance	6,795.73	
	$ 16,890.73	$ 16,890.73

NATIONAL PARK BANK LINNTON WATER

Balance per report November 30, 1915		$ 797.50
Transferred from Water Fund		8,250.00
Coupons Paid and Returned	$ 5,967.50	
Balance	3,080.00	
	$ 9,047.50	$ 9,047.50

NATIONAL PARK BANK IMPROVEMENT BOND SINKING FUND AND IMPROVEMENT BOND INTEREST FUND

Transferred from Improvement Bond Sinking Fund	.....	$ 10,000.00
Transferred from Improvement Bond Sinking Fund—St. Johns	.....	5,500.00
Transferred from Improvement Bond Int. Fund	.....	270.00
Improvement Bonds Redeemed and Returned...	$ 10,000.00	.....
Improvement Bonds Int. Coupons Redeemed and Returned	270.00	.....
Improvement Bonds, St. Johns, Redeemed and Returned	500.00	.....
	$ 15,770.00	$ 15,770.00

MT. HOOD RAILWAY & POWER CO.

Ordinance No. 22989		
Balance per report November 30, 1915.....	.....	$ 1,000.00
Warrants Paid and Returned.....	$ 1,000.00	.....
	$ 1,000.00	$ 1,000.00

MT. HOOD RAILWAY & POWER CO. PERMANENT REPAIR FUND

Balance per report November 30, 1915.....	.....	$ 1,000.00
Balance	$ 1,000.00	.....
	$ 1,000.00	$ 1,000.00

PARK AND BOULEVARD FUND

Balance per report November 30, 1916.....	.....	$ 2,346.75
Warants Paid and Returned.....	$ 2,026.98	.....
Balance	319.77	.....
	$ 2,346.75	$ 2,346.75

BILL POSTING BADGE FUND

Balance per report November 30, 1915.....	.....	$ 241.00
Received Collections.....	.....	131.00
Badges Redeemed and Returned.....	$ 129.00	.....
Balance	243.00	.....
	$ 372.00	$ 372.00

BROADWAY BRIDGE FUND

Balance same as last report.....	.....	$ 6,075.19

FIRE BOAT AND FIRE MAIN FUND

Balance same as last report.....	.....	$ 108.03

WATER BOND SINKING FUND

Balance per report November 30, 1915	.....	$201,020.87
Received Interest on Bonds	.....	52,718.62
Received Interest for Bonds Sold	.....	208,000.00
Received Bonds and Collections	.....	146,380.00
Transferred to Sinking Fund	$ 650.00	.....
Balance	607,469.49	.....
	$608,119.49	$608,119.49

WATER FUND BOND ACCOUNT

Balance same as last report	.....	$ 22.95

BONDED INDEBTEDNESS SINKING FUND

Balance per report November 30, 1915	.....	$ 824.74
Received Interest on Bonds	.....	180.00
Balance	$ 1,004.74	.....
	$ 1,004.74	$ 1,004.74

POLICE AND FIRE DEPARTMENT RELIEF FUND

Balance same as last report	.....	$ 25.35

REDEMPTION FUND

Balance per report November 30, 1915	.....	$ 1,001.19
Transferred from Improvement Bond Int. Fund	.....	28.25
Transferred from General Fund	.....	1.40
Received Collections	.....	22,725.93
Warrants Paid and Returned	$ 22,548.51	.....
Transferred to General Fund	1.39	.....
Balance	1,206.87	.....
	$ 23,756.77	$ 23,756.77

PUBLIC AUDITORIUM FUND

Balance per report November 30, 1915	.....	$ 14,673.07
Received Sale of Bonds $565,000 at .9844	.....	556,186.00
Received Interest on Daily Balance	.....	6,689.33
Transferred to General Fund	$ 983.84	.....
Warrants Paid and Returned	125,436.65	.....
Balance	451,128.91	.....
	$577,548.40	$577,548.40

SPECIAL BRIDGE FUND

Balance per report November 30, 1915	.....	$ 21,923.70
Received taxes, John M. Lewis, Co. Treasurer	.....	61,168.20
Transferred from 1916 Tax Fund	.....	56.24
Transferred from General Fund	.....	81.44
Transferred from Street Improvement Fund	.....	51.58
Transferred to General Fund	$ 1,394.05	.....
Transferred to Bond Ind't Int. Fund	2.42	.....
Transferred to Sinking Fund	.93	.....
Warrants Paid and Returned	11,893.08	.....
Balance	69,990.68	.....
	$ 83,281.16	$ 83,281.16

EXTENSION BOND SINKING FUND

Balance per report November 30, 1915	.....	$ 1,308.78
Received Collections	.....	3,179.66
Bonds Redeemed and Returned	$ 3,805.50	.....
Balance	682.94	.....
	$ 4,488.44	$ 4,488.44

EXTENSION BOND INTEREST FUND

Balance per report November 30, 1915	.....	$ 24.08
Received Interest on Assessments	.....	787.95
Received Interest on Daily Balance	.....	17.38
Interest Coupons paid returned	$ 797.28	.....
Balance	32.13	.....
	$ 829.41	$ 829.41

SINKING FUND

Balance per report November 30, 1915	.....	$ 29,698.86
Received Taxes, John M. Lewis, Co. Treasurer	.....	114,837.17
Received Interests on Bonds	.....	42,247.12
Received Interest on Daily Balance	.....	508.92
Received Bonds Redeemed	.....	3,805.50
Transfer from 1916 Tax Fund	.....	103.67
Transferred from Water Bond Sinking Fund	.....	650.00
Transferred from Special Bridge Fund	.....	.93
Bonds Redeemed and Returned	$ 10,000.00	.....
Warrants Paid and Returned	118,203.33	.....
Balance	63,648.84	.....
	$191,852.17	$191,852.17

POLICE RELIEF AND PENSION FUND

Balance per report November 30, 1915	.....	$ 4,969.24
Received Collections	.....	1,785.00
Received Interest on Bonds	.....	351.44
Received Interest on Daily Balances	.....	184.99
Warrants Paid and Returned	$ 1,327.01	.....
Balance	5,943.66	.....
	$ 7,270.67	$ 7,270.67

IMPROVEMENT BOND SINKING FUND—LINNTON

Balance per report November 30, 1915	.....	$ 6.57
Received Collections	.....	1,642.75
Balance	$ 1,649.32	.....
	$ 1,649.32	$ 1,649.32

IMPROVEMENT BOND SINKING FUND—ST. JOHNS

Balance per report November 30, 1915	.....	$ 9,988.60
Received Collections	.....	32,180.07
Transferred from Improvement Bond Sinking Fund	.....	6.53
Transferred from National Park Bank	$ 15,500.00	.....
Improvement Bonds Redeemed	10,000.00	.....
Balance	16,675.20	.....
	$ 42,175.20	$ 42,175.20

IMPROVEMENT BOND INTEREST FUND—ST. JOHNS

Balance per report November 30, 1915	.....	$ 987.15
Received Premium on Sale of Bonds	.....	702.99
Received Interest on Sale of Bonds	.....	72.00
Transferred to Improvement Bond Interest Fund, City	$ 1,762.14	.....
	$ 1,762.14	$ 1,762.14

IMPROVEMENT BOND SINKING AND INTEREST FUND

Balance per report November 30, 1915	.....	$ 21.12
Received per Receipt No. 111306	.....	35.07
Balance	$ 56.19	.....
	$ 56.19	$ 56.19

1916 TAX FUND

Balance per report November 30, 1915	.....	$ 2,303.21
Received Interest on Daily Balance	.....	3.42
Transferred to General Fund	$ 1,681.25	.....
Transferred to Bonded Indebtedness Interest Fund	284.05	.....
Transferred to Sinking Fund	103.67	.....
Transferred to Special Bridge Fund	56.24	.....
Warrants Paid and Returned	181.42	.....
	$ 2,306.63	$ 2,306.63

1917 TAX FUND

Received Taxes, John M. Lewis, Co. Treasurer	.....	$ 1,711.16
Received Interest on Daily Balances	.....	10.34
Balance	$ 1,721.50	.....
	$ 1,721.50	$ 1,721.50

STREET IMPROVEMENT FUND

Balance per Report November 30, 1915	.....	$ 28,420.30
Received Collections	.....	466,776.49
Transfered from General Fund	.....	66.10
Transferred to General Fund	$ 4,585.64	.....
Transferred to Special Bridge Fund	51.58	.....
Transferred to Street Extension Fund	2,271.50	.....
Transferred to Improvement Bond Sinking Fund	830.28	.....
Warrants Paid and Returned	468,458.68	.....
Balance	19,065.21	.....
	$495,262.89	$495,262.89

SEWER FUND

Balance per report November 30, 1915	.....	$ 12,202.68
Received Collections	.....	253,700.95
Transferred from General Fund	.....	47,26
Transferred to General Fund	$ 220.22	.....
Warrants paid and returned	260,747.59	.....
Balance	4,983.06	.....
	$265,950.89	$265,950.89

STREET EXTENSION FUND

Balance per report November 30, 1915	.....	$ 14,783.20
Received Collections	.....	25,215.96
Transferred from Street Improvement Fund	.....	2,271.50
Transferred to General Fund	$ 17,393.97	.....
Warrants Paid and Returned	11,204.05	.....
Balance	13,672.64	.....
	$ 42,270.66	$ 42,270.66

STARK STREET EXTENSION FUND

Balance per report November 30, 1915	.....	$ 500.00
Transferred to General Fund	$ 38.59	.....
Warrants Paid and Returned	461.41	.....
	$ 500.00	$ 500.00

STREET AND SEWER INTEREST FUND

Balance per report November 30, 1915	.....	$ 889.04
Received Interest on Assessments	.....	12,861.13
Transferred from General Fund	.....	2,500.00
Warrants Paid	$ 92.62	.....
Interest Paid on Warrants	13,065.02	.....
Balance	3,092.53	.....
	$ 16,250.17	$ 16,250.17

WATER MAIN FUND

Balance per report November 30, 1915	.....	$ 4,838.98
Received Collections	.....	150.70
Transferred to Water Fund	$ 4,989.68	.....
	$ 4,989.68	$ 4,989.68

SUMMARY

Balance in Treasurery December 1, 1916	$2,296,283.93	$.....
Balance in New York December 1, 1916	22,095.73	.....
Credited as follows:		
General Fund	.....	311,613.87
Water Fund	.....	131,293.13
Bonded Indebtedness Interest Fund	.....	92,458.34
Bonded Indebtedness Interest Fund, Harris-Forbes & Co., New York	.....	7,560.00
Bonded Indebtedness Interest Fund, Chemical National Bank	.....	4,300.00
Bonded Indebtedness Interest Fund, Hanover National Bank	.....	360.00
Bonded Indebtedness Interest Fund, National Park Bank	.....	6,795.73
National Park Bank—Linnton Water Fund	.....	3,080.00
Improvement Bond Sinking Fund	.....	489,103.52
Improvement Bond Interest Fund	.....	1,980.59
Library Fund	.....	16.28
Mt. Hood Ry. & Power Co., per Repair Fund	.....	1,000.00
Park and Boulevard Fund	.....	319.77
Bill Posting Badge Fund	.....	243.00
Broadway Bridge Fund	.....	6,075.19
Fire Boat and Fire Main Fund	.....	108.03
Water Bond Sinking Fund	.....	607,469.49
Water Fund Bond Account	.....	22.95
Bonded Indebtedness Sinking Fund	.....	1,004.74
Police and Fire Department Relief Fund	.....	25.35
Redemption Fund	.....	1,206.87
Public Auditorium Fund	.....	451,128.91
Special Bridge Fund	.....	69,990.68
Extension Bond Sinking Fund	.....	682.94
Extension Bond Interest Fund	.....	32.13
Sinking Fund	.....	63,648.84
Police Relief and Pension Fund	.....	5,943.66
Improvement Bond Sinking Fund—Linnton	.....	1,649.32
Improvement Bond Sinking Fund—St. Johns	.....	16,675.20
Improvement Bond Sinking and Interest Fund	.....	56.19
1917 Tax Fund	.....	1,721.50
Street Improvement Fund	.....	19,065.21
Sewer Fund	.....	4,983.08
Street Extension Fund	.....	13,672.64
Street and Sewer Interest Fund	.....	5,092.53
	$2,318,379.68	$2,318,379.68

Respectfully submitted,

WM. ADAMS,
City Treasurer.

December 8, 1916.

ANNUAL REPORT

OF

THE OFFICE OF THE CITY AUDITOR

FOR THE FISCAL YEAR ENDING
NOVEMBER 30, 1916

	Balance Dec. 1, 1915	Received by Transfer	Receipts	Disbursements	Disbursed by Transfer	Balance Nov. 30, 1916	Warrants Outstanding Dec. 1, 1915	Warrants Drawn	Warrants Paid	Warrants Canceled	Warrants Outstanding Nov. 30, 1916
1. General Fund	$ 555,233.27	$ 35,724.47	†$2,396,478.66	†$2,540,035.96	$ 135,786.57	$ 311,613.87	$ 183,257.94	$2,526,429.77	$2,526,011.96	$ 12,199.79	$ 171,475.96
2. Bonded Indebtedness Interest Fund	105,193.65	2,484.05	315,081.14	291,400.50	38,900.00	92,458.34		128.50	118.00		10.50
3. Chemical National Bank, New York	4,475.00	33,400.00		33,575.00		4,300.00					
4. Harris, Forbes & Co., New York	300.00	3,000.00		1,710.00		1,590.00					
5. Hanover National Bank, New York	180.00	180.00				360.00					
6. Public Library Fund	9.54		6.74			16.28		16.28			16.28
7. Special Bridge Fund	21,923.70	189.26	61,152.47	11,893.08	1,381.67	69,990.68	544.00	12,526.06	11,893.08		1,176.98
8. Sinking Fund	29,698.86	753.67	161,399.64	128,203.33		63,648.84		182,021.98	118,203.33		63,818.65
9. Water Fund	136,175.68	7,653.37	895,739.48	877,787.50	30,487.90	131,293.13	27,682.86	572,758.16	575,532.50	123.44	24,785.08
10. *Chase National Bank, New York	90.00	3,000.00		3,090.00							
11. *Harris, Forbes & Co., New York	270.00	12,000.00		6,300.00		5,970.00					
12. *National Park Bank, New York	797.50	8,250.00		5,967.50		3,080.00					
13. Water Bond Sinking Fund	201,020.87		407,098.62	215,000.00	650.00	392,469.49					
14. Police and Fire Dept. Relief Fund	25.35					25.35	25.35				25.35
15. Redemption Fund	1,001.19	29.65	22,725.93	22,548.51	1.39	1,206.87	293.54	22,831.56	22,548.51	13.02	563.57
16. Water Fund Bond Account	22.95					22.95	22.95				22.95
17. Park and Boulevard Fund	2,346.75			2,026.98		319.77	198.98	1,828.00	2,026.98		
18. Broadway Bridge Fund	6,075.19					6,075.19	24.07				24.07
19. Fire Boat and Fire Mains Fund	108.03					108.03					
20. Bill Posting Badge Fund	241.00		131.00	129.00		243.00					
21. aMt. Hood Ry. & Power Co., Deposit Fund	1,000.00			1,000.00				1,000.00	1,000.00		
22. bMt. Hood Ry. & Power Co., St. Repair Fund	1,000.00					1,000.00					
23. Street Improvement Fund	28,420.30	66.10	464,504.99	468,458.68	5,467.50	19,065.21	338,269.34	649,679.05	468,458.68	118,127.50	401,362.21
24. Sewer Fund	12,202.68	47.26	253,700.95	260,747.59	220.22	4,983.08	41,605.02	278,299.17	260,747.59	30,561.39	28,595.21
25. Street Extension Fund	14,733.20		27,487.46	11,204.05	17,393.97	13,672.64	2,549.67	11,075.05	11,204.05	659.37	1,761.30
26. Stark Street Extension Fund	500.00			461.41	38.59			461.41	461.41		
27. Water Main Funds	4,838.98		150.70		4,989.68		6,136.25			6,136.25	
28. Street and Sewer Interest Funds	889.04	2,500.00	12,861.13	13,157.64		3,092.53		92.62	92.62		
29. Imp. Bond Sinking Fund	200,382.06	1,364.83	1,769,537.84	1,482,174.68	6.53	489,103.52	176.60	2,006.24	1,899.73		283.11
30. Imp. Bond Interest Fund	9,753.58	129,863.75	686,644.45	809,170.01	15,111.18	1,980.59	105.87	1,043.57	980.60		168.84
31. cNational Park Bank, New York	2,367.28	30,293.45		25,865.00		6,795.73					
32. Imp. Bond Sinking and Imp. Bond Int. Fund	21.12		35.07			56.19					
33. Street Extension Bond Sinking Fund	1,308.78		3,179.66	3,805.50		682.94					
34. Street Extension Bond Interest Fund	24.08		805.33	797.28		32.13					
35. Imp. Bond Sinking Fund of St. Johns	9,988.60	6.53	32,180.07	10,000.00	15,500.00	16,675.20					
36. Imp. Bond Interest Fund of St. Johns	987.15		774.99		1,762.14						
37. Imp. Bond Sinking Fund of Linnton	6.57		1,642.75			1,649.32					
38. Bonded Indebtedness Sinking Fund	824.74		180.00			1,004.74					
39. Special Tax Fund, 1916	2,303.21		3.42	181.42	2,125.21			181.42	181.42		
40. Special Tax Fund, 1917			1,721.50			1,721.50					
41. Public Auditorium Fund	14,673.07		562,875.33	155,435.65	93.84	421,128.91		129,735.65	125,435.65		4,300.00
42. Police Relief Fund	4,969.24		2,301.43	1,327.01		5,943.66	51.75	1,400.08	1,327.01		124.82
Totals	$1,376,432.21	$ 270,806.39	$8,080,400.75	$7,383,453.28	$ 270,806.39	$2,673,379.68	$ 600,944.19	$4,393,514.57	$4,128,123.12	$ 167,820.76	$ 698,514.88

*Custodians of Funds in New York, to pay interest on Water Bonds.
aAmount deposited as required by Ord. 22989.
bAmount deposited as guarantee that streets disturbed in constructing conduits will be properly replaced.
cCustodian of Funds in New York to pay interest on St. Johns Imp. Bonds.
†Included in these amounts is $105,000, being securities sold and repurchased plus interest, $717.50

GENERAL FUND

RECEIPTS		
Balance December 1, 1915	$.....	$ 555,233.27
Property Taxes—		
Taxes, 1916	1,813,333.45	
Delinquent Taxes	40,119.88	
Taxes, St. Johns	1,440.34	
Taxes, Linnton	686.55	1,855,580.22
Interest—		
Interest on Daily Balances	7.319.92	
Interest on City Warrants	6,555.08	13,875.00
Licenses—		
General Licenses	65,896.07	
Milk and Cream Licenses	2,149.50	
Vehicle Licenses	15,735.95	
Dog Licenses	11,006.00	
Motor Bus Licenses	7,440.47	
Registration Electrical Contractors	2,000.00	104,227.99
Franchises—		
O.-W. R. & N. Co.	263.00	
Southern Pacific Co.	2,500.00	
Spokane, Portland & Seattle Ry.	500.00	
Portland Ry., Light & Power Co.	12,023.00	
Oregon Electric Co.	1,285.00	
Portland Gas & Coke Co.	100.00	
Northwestern Electrical Co.	12,602.83	
United Ry. Co.	623.40	
Home Telephone Co.	3,018.52	
Central Heating Co.	50.00	
Portland Central Heating Co.	5.00	
Pacific Telephone & Telegraph Co.	1,000.00	
Errol Height Railway Co.	73.40	
Heights Trust Co.	65.00	
Mt. Hood Ry., Light & Power Co.	1,000.00	35,109.15
Crossing Bridges—		
Burnside Bridge	5,693.43	
Broadway Bridge	10,290.27	
Hawthorne Bridge	20,266.02	
Morrison Bridge	13,293.69	49,543.41
Fees and Fines—		
Municipal Court	35,691.50	
Pound Fees	1,211.45	
Building Permits	11,567.85	
Sidewalk Permits	1,135.95	
Driveway Permits	55.50	
Plumbing Permits	1,948.50	
Grading Permits	2.50	
Bill Board Permits	14.50	
Birth and Death Certificates	161.00	
Comfort Station	92.82	
Telephone Booths	7.59	
Public Market	7,525.75	
Badges	63.00	
Concessions City Parks	1,525.00	
Appeal from Building Inspector	50.00	
Home Telephone & Telegraph Co., Judgment	500.00	61,552.91
Public Improvements—		
Cost Engineering, Adv., etc.	72,469.89	
Premium on Bonds	26,274.55	
Cost of Advertising Delinquent Assessments.	2,158.70	
Forfeiture of contractors	30.00	
Interest on Street Extensions	219.83	
Rolling	868.64	
Right of Way	25.00	
Penalty	454.77	102,501.38
Rents, Leases, etc.—		
Jefferson Street Levee	4,170.79	
Cameron Taylor Lumber Co.	25.00	
Detention Home	200.00	4,395.79

GENERAL FUND—Continued

Use of Streets—		
S. P. Co.	$ 25.00	
P. R., L. & P. Co.	60.00	
East Side Mill & Lumber Co.	50.00	$ 135.00
Sale of Personal Property and Contributions for Services Performed—		
Cutting Weeds	218.94	
Construction and Repairs to Sidewalks	9,970.89	
Certified Copies	99.30	
Blue Prints	429.77	
City Charters	14.40	
Witness Fees—		
N. M. Moody $ 2.00		
J. J. Curtin 2.10		
W. D. Smith 2.10		
C. D. Jamison 3.20		
F. S. Pierce 4.35		
E. W. Jones 2.20		
Mrs. P. Barkhurst 8.00		
Geo. L. Baker 2.20		
W. H. Daly 2.10		
R. G. Dieck 2.10		
H. R. Albee 2.10		
C. A. Bigelow 4.20		
A. L. Barbur 2.10		
L. E. Burdick 2.10	40.85	
Duplicate License Tags	27.00	
Public Docks Commission, Stationery, etc.	525.63	
Wood Sold	25,253.87	
Tests	371.67	
Storage of Library Car, Gasoline, etc.	159.36	
Electric Codes	77.50	
Electrical Inspection	5.50	
Repairs to Hydrants	65.49	
Sacks Sold	2,273.20	
Scrap Iron	37.00	
Guinea Pigs	30.75	
Antitoxin	74.10	
Old Roller Wheels	50.20	
Miscellaneous Junk	40.00	
Old Auto Tires	143.29	
Old Cadillac Car	250.00	
Two Ford Cars	413.00	
Old Sweeper Flushing Wagon and Supplies	264.00	
Multnomah Co. R. I. Balls	88.37	
Cowlitz Bridge Co., Plans	10.00	
Old Fire Hose	11.05	
Spring Wagon	78.50	
Safety First Signs	75.88	
Steam Boiler	20.00	
Split Pile Heads	6.00	
Horses	921.47	
Oil Barrels	20.00	
Blankets Destroyed	4.50	
Vending Machine	4.80	
Cleaning Sewer	5.98	
Making Sewer Connection	5.24	
Work on 28th Ave. Southeast	31.63	
C. R. Davis, Repairs to Car	88.85	
J. R. Wood, Repairs to Car	2.72	
P. R., L. & P. Co., Repairs to Car	19.97	
Tariff & Callaly, Moving Tool Box	6.97	
L. J. Schrubb, Repairs to Flusher	16.00	
Locomobile Co., Repairs to Flusher	51.53	
Repairs to Flusher	43.34	
Photo Prints	.93	

GENERAL FUND—Continued

J. McI Wood, Repairs to Sewer	$ 5.00	
Wm. Muirhead, Repairs to Street	7.96	
S., P. & S. Co., Material for Macadamizing	223.20	
Repairs to Pavement	75.22	
Monument Covers	7.84	
Abrahams & Co., Refilling Trenches	27.23	
H. W. Corbett Est., Repairs to Catch Basin	25.05	
Firemen's Relief & Pension Fund, Stationery	17.58	
A. D. Moody, Cutting Fire Alarm Wires	9.75	
E. Holman, Survey Work	14.60	
Clark, Henry Construction Co., Sample of Pavement	5.00	
Kliest & Co., Supplies	6.86	
S. W. Smith, Removing Dirt	12.50	
St. Vincent's Hospital, Removing Slide	19.33	
P. R., L. & P. Co., Crushed Rock	64.35	
F. H. Miller, Repairs to Catch Basin	45.89	
Repairs to Sewer	11.55	
Repairs to Semaphore	1.06	
P. R., L. & P. Co., Repairs to Bridge	87.23	
N. W. Ins. Co., Loss of Wood	14.57	
Bertha Gaynor, Flushing Sewer	6.00	
W. H. Christensen, Sewer Connections	18.00	
Clackamas County, Repairs to Bridge	129.21	
Port of Portland, Imp. Edgewater Ave	1,250.00	
Portland Artificial Ice Co., Investigating Sewer	15.64	
Idaho Asbestos Shingle Co., Use of Labratory	20.50	
Construction of Runway	10.00	
Pacific Fire Ext. Co., Repairs to Cut	13.48	
J. R. Wood, Storage	.50	
Ladd Estate Co., Building Fence	200.00	
Tree Surgery	18.75	
Spraying Trees	5.00	
P. R., L. & P. Co., Repairs to Buff Transit	30.75	
Irwin-Hodson Co., Repairs to Ford Car	26.29	
Wagons, Harness, etc	755.00	$ 45,530.33
Refunds—		
Refunds on Insurance	467.95	
Refunds by City Attorney	24.31	
N. P. Express Co	.25	
Marshall Wells Hdwe. Co	.80	
C. J. Honeyman	.10	
Apperson Bros.	3.26	
Wells Fargo Exp. Co	.72	
Over-payment of Claim Refunded	1.00	
Refunds on Plants	2.06	
War Tax Stamps	.20	
Cost of City Cases	704.93	
Azar & Co., Cost Re-advertising	4.03	1,209.61
Miscellaneous—		
Geo. Wagner, Damage to Horse and Cart	14.00	
Chas. E. Miller, Damage to Cart	5.25	
Damage Extension E. 58th Street	10.00	
J. Vanderwalden, Damage to Cart	3.00	
Redemption of Property	532.12	
Checks not cashed	.20	
Assignment, E. Cramer	4.25	
Warrants Cashed, held by General Fund	13,210.61	13,779.43
Non-Revenue Receipts—		
Sale of Street and Sewer Warrants	105,000.00	
Oregon Humane Society, Payment of Loan	4,000.00	
Lease, 82nd and Foster Road, property not owned by City, Money Refunded	25.00	
Oregon Humane Society, Refunded Payment for Horse	13.44	109,038.44
		$2,951,711.93

GENERAL FUND—Continued

Transfers—		
Special Tax Fund	$ 1,681.25	
Special Bridge Fund	1,381.67	
Water Fund	7,237.90	
Bonded Indebtedness Interest Fund	2,200.00	
Street Extension Fund	17,393.97	
Street Improvement Fund	4,585.64	
Public Auditorium Fund	983.84	
Sewer Fund	220.22	
Stark Street Extension Fund	38.59	
Redemption Fund	1.39	$ 35,724.47
		$2,987.436.40
DISBURSEMENTS		
Warrants Paid and Returned	$2,420,294.46	
Warrants and Certificates Purchased	105,717.50	
Crematory Bonds Redeemed	10,800.00	
Interest Paid on Crematory Bonds	3,135.00	
Hotel Runners Badges Redeemed	89.00	2,540,035.96
Transfers—		
Water Fund	2,543.69	
Improvement Bond Sinking Fund	245.07	
Redemption Fund	1.40	
Improvement Bond Interest Fund	128,101.61	
Bonded Indebtedness Interest Fund	2,200.00	
Special Bridge Fund	81.44	
Street and Sewer Interest Fund	2,500.00	
Sewer Fund	47.26	
Roswell Street to Alley $ 31.50		
E. 58th and E. Everett St. System 13.76		
Willow and E. 82d St. Sewer 1.00		
E. Alder St. Trunk Sewer 1.00		
Street Improvement Funds	66.10	135,786.57
Peninsular Avenue $ 30.27		
E. 67th St., 55th Ave. to 50th Ave 1.59		
Wemath Lane 4.35		
Marguerite Ave., Division to Hawthorne Ave. 29.89		
Balance, November 30, 1916		311,613.87
		$2,987,436.40

ANALYSIS OF ANNUAL EXPENSES OF THE VARIOUS DEPARTMENTS PAYABLE OUT OF THE GENERAL FUND--DEPARTMENT OF PUBLIC SAFETY

Code Designation		Mayor's Office	Bureau of Fire	Municipal Court	Bureau of Police	Bureau of Health	Pound	Moving Picture Censor
A—	**Personal Service**							
1	Salaries	$10,178.53	$512,688.62	$ 7,740.00	$ 359,533.15	$42,587.06	$ 2,086.85	$1,067.60
2	Special Services		374.00	807.00				
B—	**Supplies**							
1	Office	88.19	1,122.69	196.44	747.16	896.27		75.94
2	Fuel		12,361.95		1,574.06	64.50		
3	Forage and Veterinary		11,414.73				22.00	
4	Food				3,648.50	650.71		
5	Cleaning and Disinfecting	.98	1,581.74		641.41	806.06		
6	Motor Vehicle	67.95	3,719.48		3,483.91	665.73		
7	Botanical and Agricultural		4.70					
8	Educational and Recreational					37.39		
9	Medical and Surgical					1,422.00		
10	General Plant		2,715.86		482.68	241.53		
C—	**Material**							
3	Building		3,498.88		168.83	558.60	2.34	
4	General Plant		2,967.21		452.35	24.06		
D—	**Equipment**							
1	Office	30.80	296.93	4.00	24.07	89.26		12.00
2	Household		333.41		99.00	6.50		
3	Livestock		250.00					
4	Motorless Vehicles and Equipment		116.91					
5	Motor Vehicles and Equipment	501.33	1,164.39		3,342.12	1,728.99		
7	Tools		154.95		6.66	59.75		
8	General Plant		6,211.85		34.12	80.31		
E—	**Contract and Open Order Service**							
1	Construction and Extension					32.65		
	Repairs:							
2	General		8,588.39		442.83	21.00	50.05	1.25
3	Motor Vehicle	15.14	7,027.70		3,145.76	740.92		
	Light, Heat and Power.							
4c	Power		60.00				2.57	
4d	Heat					25.91		
5	Janitorial Service		439.80	28.00	237.09	139.98		

ANALYSIS OF ANNUAL EXPENSES OF THE VARIOUS DEPARTMENTS PAYABLE OUT OF THE GENERAL FUND—DEPARTMENT OF PUBLIC SAFETY—Continued

Code Designation		Mayor's Office	Bureau of Fire	Municipal Court	Bureau of Police	Bureau of Health	Pound	Moving Picture Censor
	Transportation and Communication							
6a	Hire of Horses and Vehicles		42.00			322.00		
6b	Hire of Automobiles					10.80		
6d	Shoeing and Boarding Horses		4,111.41				58.00	
6e	Carfare		4.50		13.50	573.75	9.00	9.75
6f	Other Transportation					245.03		
7a	Telephone		162.03		1,248.06			
7b	Telegraph and Messenger Service	11.74	1.45		103.67			
8	General Plant Service			.60	32.86	2,193.84		
F—	Contingencies		1,884.62		2,189.43			
G—	**Fixed Charges and Contributions**							
2	Rent	1.50	*520.00			42.00		
6	Other Fixed Charges	3.00	784.00			3.00		
7	Other Contributions		1,335.00					
H—1	Purchase of Property		600.00					
2	Assessments against City Property		704.10		26.91			
	Total Expenditures	$ 10,899.16	586,203.30	8,776.04	381,678.13	54,269.60	2,230.81	1,166.54
	Total Warrants Drawn	$ 10,797.90	567,497.50	8,588.60	378,320.60	52,267.59	2,221.81	1,079.60
	Miscellaneous Debits	101.26	25,972.68	187.44	3,457.03	2,007.89	9.00	86.94
	Miscellaneous Credits		7,266.88		99.50	5.88		
	Outstanding Claims		14,633.37		953.33	1,985.55		
	Total Encumbrance	$ 10,899.16	600,836.67	8,776.04	382,631.46	56,255.15	2,230.81	1,166.54
	Total Appropriations	$ 10,899.16	603,486.67	8,776.04	382,631.46	56,255.15	2,230.81	1,166.54
	Balance of Appropriation carried forward		2,650.00					

*Deduct.

ANALYSIS OF ANNUAL EXPENSES OF THE VARIOUS DEPARTMENTS PAYABLE OUT OF THE GENERAL FUND—DEPARTMENT OF FINANCE

Code Designation		Office of Commissioner	Bureau of Licenses	City Treasurer	Municipal Garage	Public Market	Bureau of Purchases and Stores	City Store House	Shop Equipment	Debt Service
A—	**Personal Service**									
1	Salaries	$ 6,020.00	1,800.00	16,293.87	2,907.05	2,202.00	9,430.00	600.00	.....	.....
B—	**Supplies**									
1	Office	26.75	170.74	5,149.46	23.87	42.64	248.93	.....	.....	.....
2	Fuel	.....	.....	.....	84.36	.....	.....	.....	.....	.....
5	Cleaning and Disinfecting	.....	.....	.....	80.73	.....	.....	.....	.....	.....
6	Motor Vehicle	.....	.....	.....	2,108.04	.....	.....	.....	.....	.....
10	General Plant	5.30	.....	.....	87.46	32.90	.....	.....	.....	.....
C—	**Material**									
3	Building	.....	.....	.....	1.00	.....	.....	.....	.....	.....
4	General Plant	.....	.....	.....	17.75	8.43	.....	.....	.....	.....
D—	**Equipment**									
1	Office	2.50	.....	209.97	.....	70.58	17.05	.....	.....	.....
7	Tools	.....	.....	.....	15.33	.44	.....	.....	54.81	.....
8	General Plant	.....	.....	.....	65.45	.....	.....	.....	862.31	.....
E—	**Contract and Open Order Service Repairs**									
2	General	.....	.....	108.85	.....	25.00	.....	.....	.....	.....
3	Motor Vehicle	.....	.....	.....	.....	.....	.....	49.94	.....	.....
	Light Heat and Power									
4c	Power	.....	.....	.....	38.53	.....	.....	.....	.....	.....
4d	Heat	.....	.....	.....	33.97	.....	.....	.....	.....	.....
5	Janitorial Service	.....	.....	.....	11.50	242.00	.....	.....	.....	.....
	Transportation and Communication									
6e	Carfare	.....	.....	.....	.....	.....	9.00	.....	.....	.....
6f	Other Transportation	.....	.....	12.79	.....	2.00	.....	.....	.....	.....
7a	Telephone	.....	.....	1.00	96.00	.....	.15	.....	.....	.....
7b	Telegraph and Messenger Service	.....	.....	.....	.....	.....	2.56	.....	.....	.....
F—	Contingencies	.....	.....	.....	.....	.....	.....	.....	.....	.....
G—	**Fixed Charges and Contributions**									
1a	Interest	.....	.....	.....	.....	.....	.....	.....	.....	1,444.52
1b	Redemption	.....	.....	.....	.....	.....	.....	.....	.....	2,136.50
2	Rent	.....	.....	198.00	345.13	68.00	.....	.....	.....	.....
4	Insurance	.....	.....	.....	.....	5.00	.....	.....	.....	.....
5	Advertising	.....	.....	37.85	.....	.....	.....	.....	.....	.....
6	Other Fixed Charges	.....	.....	.....	.....	6.00	3.00	.....	.....	.....
	Total Expenditures	$6,054.55	1,970.74	22,011.79	5,916.17	2,704.99	9,710.69	649.94	917.12	3581.02

ANALYSIS OF ANNUAL EXPENSES OF THE VARIOUS DEPARTMENTS PAYABLE OUT OF THE GENERAL FUND—DEPARTMENT OF FINANCE—Continued

Code Designation		Office of Commissioner	Bureau of Licenses	City Treasurer	Municipal Garage	Public Market	Bureau of Purchases and Stores	City Store House	Shop Equipment	Debt Service
	Total Warrants drawn	$6,022.50	1,824.75	21,336.35	5,857.46	2,593.02	9,474.46	600.00	879.32	3581.02
	Miscellaneous Debits	32.05	145.99	675.44	766.13	111.97	298.11	49.94	37.80	.....
	Miscellaneous Credits	.....	.....	.....	707.42	.....	61.88	.....	.....	.....
	Outstanding Claims	6.50	199.50	46.60	471.65	36.00	112.10	.....	77.50	.....
	Total Encumbrance	$6,061.05	2,170.24	22,058.39	6,387.82	2,740.99	9,822.79	649.94	994.62	3581.02
	Total Appropriation	$ 6,061.05	2,170.24	22,058.39	6,387.82	2,740.99	9,822.79	649.94	994.62	3581.02

ANALYSIS OF ANNUAL EXPENSES OF THE VARIOUS DEPARTMENTS PAYABLE OUT OF THE GENERAL FUND—DEPARTMENT OF PUBLIC AFFAIRS

Code Designation		Office of Commissioner	Bureau of Parks	Office of City Attorney	City Hall	Bureau of Weights and Measures	Public Employment Bureau	Free Museum	Municipal Reference Library
A—	**Personal Service**								
1	Salaries	$ 7,649.67	110,246.59	20,889.94	13,837.03	3,000.00	4,593.55		
2	Special Services								
B—	**Supplies**								
1	Office	93.40	409.63	399.13	5.54	20.79	310.17		22.92
2	Fuel		931.47		1,859.42		256.50		
3	Forage and Veterinary		5,405.83						
4	Food		182.00						
5	Cleaning and Disinfecting		922.79		243.96		8.34		
6	Motor Vehicle		209.97			42.41			
7	Botanical and Agricultural		1,803.02						
8	Educational and Recreational		578.90						
10	General Plant	13.45	851.93		244.22	7.33	1.98		.40
C—	**Material**								
1	Highway		4,113.09						
2	Sewer		60.70						
3	Building		897.67		26.75				
4	General Plant		8,404.19		25.12				
D—	**Equipment**								
1	Office	5.55	9.25	265.81	7.50	5.25	107.70		
2	Household		17.35		8.47				
3	Livestock		38.17						
4	Motorless Vehicles and Equipment		701.94						
5	Motor Vehicles and Equipment		1.50						
6	Educational and Recreational		3,555.79						
7	Tools		166.59		.64				
8	General Plant		1,955.90		55.56		7.20	146.90	
E—	**Contract and Open Order Service**								
1	Construction and Extension		12,509.10		89.20				
	Repairs								
2	General		1,993.56	8.12	212.21	1.00	23.75	9.22	1.09
3	Motor Vehicle		667.34			98.78			
	Light, Power and Heat								
4d	Heat		213.00		101.81				
5	Janitorial Service		2,378.64		562.29				

ANALYSIS OF ANNUAL EXPENSES OF THE VARIOUS DEPARTMENTS PAYABLE OUT OF THE GENERAL FUND—DEPARTMENT OF PUBLIC AFFAIRS—Continued

Code Designation		Office of Commissioner	Bureau of Parks	Office of City Attorney	City Hall	Bureau of Weights and Measures	Public Employment Bureau	Free Museum	Municipal Reference Library
	Transportation and Communication								
6a	Hire of Horses								
6b	Hire of Automobiles		132.60			10.50	7.00		
6c	Storage of Motor Vehicles								
6d	Shoeing and Boarding Horses		238.00						
6e	Carfare		142.50			28.00	160.60		
6f	Other Transportation		34.40	38.05			16.75	.67	
7a	Telephone	2.00	221.95	2.25	1,132.19		142.54		
7b	Telegraph	.91	9.41	5.53			3.26		
8	General Plant Service		5,809.82	1,863.50	176.63		1.50	125.00	
F—	Contingencies		1,001.03						
G—	**Fixed Charges and Contributions**								
2	Rent		1,009.31				2,400.00		
5	Advertising		1.58				804.89		
6	Other Fixed Charges		11.00			3.00			
H—2	Assessments Against City Property		5,009.02						
	Relief of Unemployed	41,738.60							
	Total Paid	$ 7,764.98	$ 214,585.13	$ 23,472.33	$ 18,588.54	$ 3,217.06	$ 8,845.73	$ 282.19	$ 24.01
	Total Warrants drawn	7,655.08	210,755.54	23,077.38	18,518.87	3,088.48	8,386.21	279.47	
	Miscellaneous Debits	109.90	4,610.88	394 95	69.67	128.58	459.52	2.72	24.01
	Miscellaneous Credits		781.29						
	Outstanding Claims	53.99	2,675.86		412.81	31.05	167.36	110.00	
	Total Encumbrance	$ 7,818.97	$ 217,260.99	$ 23,472.33	$ 19,001.35	$ 3,248.11	$ 9,013.09	$ 392.19	$ 24.01
	Total Appropriation	7,818.97	217,260.99	23,472.33	19,001.35	3,248.11	9,013.09	392.19	24.01

ANALYSIS OF ANNUAL EXPENSES OF THE VARIOUS DEPARTMENTS PAYABLE OUT OF THE GENERAL FUND—DEPARTMENT OF PUBLIC UTILITIES

Code Designation		Office of Commissioner	Lighting	Motor Bus Inspection	Bureau of Street Cleaning	Bureau of Garbage Disposal
A—	**Personal Service**					
1	Salaries	$ 9,600.65	$ 281.00	$ 1,100.00	$ 193,914.19	$ 19,952.82
2	Special Services				121.75	
B—	**Supplies**					
1	Office	83.59		78.85	178 67	5.57
2	Fuel				826.39	
3	Forage and Veterinary				11,558.72	96.40
5	Cleaning and Disinfecting				220.70	
6	Motor Vehicle				3,466.49	
7	Botanical and Agricultural					3.48
10	General Plant	4.35	*62.12		5,438.31	55.82
C—	**Material**					
1	Highway				7,683.70	
2	Sewer					8.82
3	Building				171.81	
4	General Plant				1,191.02	2,039.92
D—	**Equipment**					
1	Office	11.90			2.50	
4	Motorless Vehicles and Equipment				960.59	
5	Motor Vehicles and Equipment				16,947.02	
7	Tools				569.51	35.15
8	General Plant				385.50	86.74
E—	**Contract and Open Order Service Repairs**					
2	General	8.50			1,256.32	52.63
3	Motor Vehicle				3,590.93	
	Light, Heat and Power					
4a & 4b	Lighting Streets and Buildings		177,070.42			
4c	Power				20.48	64.80
	Transportation and Communication					
6a	Hire of Horses and Vehicles				31.50	
6b	Hire of Automobiles				2.54	
6d	Shoeing and Boarding Horses				270.00	8.90
6e	Carfare				94.00	11.00
7a	Telephone				143.02	
7b	Telegraph	11.65				
8	General Plant Service				140.00	
F—	Contingencies				292.50	15.00

ANALYSIS OF ANNUAL EXPENSES OF THE VARIOUS DEPARTMENTS PAYABLE OUT OF THE GENERAL FUND—DEPARTMENT OF PUBLIC UTILITIES—Continued

Code Designation		Office of Commissioner	Lighting	Motor Bus Bus Inspection	Bureau of Street Cleaning	Bureau of Garbage Disposal
G—	**Fixed Charges and Contributions**					
2	Rent					
6	Other Fixed Charges				46.50	
	Total Expenditures	$ 9,720.64	$ 177,289.30	$ 1,178.85	$ 249,524.66	$ 22,437.05
	Total Warrants drawn	$ 9,631.80	$ 177,320.65	$ 1,100.00	$ 245,506.94	$ 22,349.75
	Add Miscellaneous Debits	88.84	30.77	78.85	4,405.94	87.30
	Deduct Miscellaneous Credits		62.12		388.22	
	Outstanding Claims		20,000.00	16.10	1,339.25	15.50
	Total Encumbrance	$ 9,720.64	$ 197,289.30	$ 1,194.95	$ 250,863.91	$ 22,452.55
	Total Appropriation	9,720.64	197,289.30	1,194.95	250,863.91	22,452.55

*Deduct.

ANALYSIS OF ANNUAL EXPENSES OF THE VARIOUS DEPARTMENTS PAYABLE OUT OF THE GENERAL FUND—DEPARTMENT OF PUBLIC WORKS

Code Designation		Dept. of Public Works	Special Appropriations	Total
A—	**Personal Service**			
1	Salaries	$ 234,848.81	$ 24,520.03	$ 259,368.84
2	Special Services	10.00		10.00
B—	**Supplies**			
1	Office	2,507.32	26.13	2,533.45
2	Fuel	1,301.45	3.55	1,305.00
4	Food		16.05	16.05
5	Cleaning and Disinfecting	1.80		1.80
6	Motor Vehicle	819.65	1.50	821.15
10	General Plant	478.54	226.94	705.48
C—	**Material**			
1	Highway	14,775.01	3,145.56	17,920.57
2	Sewer	6,298.05	813.19	7,111.24
3	Building	6.10		6.10
4	General Plant	1,821.66	3,072.45	4,894.11
D—	**Equipment**			
1	Office	465.88		465.88
5	Motor Vehicle	2,722.81		2,722.81
7	Tools	282.89	144.27	427.16
8	General Plant	1,178.73	620.56	1,799.29
E—	**Contract and Open Order Service Repairs**			
2	Street Maintenance	13,791.95		13,791.95
2	General Repairs	9,075.82	9,592.68	18,668.50
3	Motor Vehicle Repairs	868.99		868.99
	Light, Power and Heat			
4c	Power	41.85		41.85
	Transportation and Communication			
6a	Hire of Horses and Vehicles	4,414.09	1,032.91	5,447.00
6b	Hire of Automobiles	436.07	706.66	1,142.73
6c	Storage of Motor Vehicles	20.00		20.00
6e	Carfare	1,982.95	80.35	2,063.30
6f	Other Transportation	1.82	53.20	55.02
7a	Telephone	2.66	21.65	24.31
7b	Telegraph and Messenger Service	28.99		28.99
8	General Plant Service	*462.16	202.42	*259.74
F—	Contingencies	1,647.84		1,647.84
G—	**Fixed Charges and Contributions**			
2	Rent	444.25	3.00	447.25
4	Insurance		308.55	308.55
5	Advertising	.84		.84
6	Other Fixed Charges	65.08		65.08
H—2	Assessments against City Property	125.00		125.00
	Total Expenditures	$ 300,004.74	$ 44,591.65	$ 344,596.39
	Special Appropriations			
	Flushing Sewers—Former City of St. Johns	23.15		
	Peninsula Dist. Sewer Survey	721.62		
	Repairs to Montgomery Drive Retaining Wall	774.62		
	Sewer in East 31st Street	1,376.05		
	Refilling East Alder Street Sewer	1,091.26		
	Repairing Pavement on East Morrison Street	1,007.83		
	Removal of Snow and Ice	1,126.54		
	Removal of Slides	32,060.47		
	Council Crest Drive Sewer	120.00		
	Planking East Alder Street	166.64		
	Reconstruction of East Alder Street Sewer	2,112.44		
	Improvements on Washington Street	2,046.24		
	Repairs to Track Area on Broadway Bridge	1,145.64		
	Removal of Earth, etc., Hillside Boulevard	819.15		
	Total Expenditures	$ 344,596.39		

*Deduct.

ANALYSIS OF ANNUAL EXPENSES OF THE VARIOUS DEPARTMENTS PAYABLE OUT OF THE GENERAL FUND—DEPARTMENT OF PUBLIC WORKS—Continued

Code Designation		Dept. of Public Works	Special Appropriations	Total
	Total Warrants drawn	345,314.56		
	Add Miscellaneous Debits	7,931.38		
	Deduct Miscellaneous Credits	8,649.55		
	Outstanding Claims	8,961.13		
	Total Encumbrance	$ 353,557.52		
	Total Appropriation	361,525.21		
	Unencumbered Balance of Appropriation	$ 7.967.69		

ANALYSIS OF ANNUAL EXPENSES OF THE VARIOUS DEPARTMENTS PAYABLE OUT OF THE GENERAL FUND—OFFICE OF AUDITOR

Code Designation		
A—	**Personal Service**	
1	Salaries	$ 42,535.41
B—	**Supplies**	
1	Office	1,368.76
4	Food	52.70
D—	**Equipment**	
1	Office	255.10
E—	**Contract and Open Order Service Repairs**	
2	General	64.80
	Transportation and Communication	
6e	Carfare	1.00
8	General Plant Service	14.00
G—	**Fixed Charges and Contributions**	
6	Other Fixed Charges—Recording	12.35
	Total Expenditures	$ 44,304.12
	Total Warrants drawn	42,970.34
	Add Miscellaneous Debits	1,398.23
	Deduct Miscellaneous Credits	64.45
	Claims Outstanding	487.73
	Total Encumbrance	$ 44,791.85
	Total Appropriation	44,791.85

ANALYSIS OF ANNUAL EXPENSES OF THE VARIOUS DEPARTMENTS PAYABLE OUT OF THE GENERAL FUND—CIVIL SERVICE BOARD

Code Designation		
A—	**Personal Service**	
1	Salaries	$ 3,446.90
B—	**Supplies**	
1	Office	245.90
D—	**Equipment**	
1	Office	2.00
E—	**Contract and Open Order Service Repairs**	
2	General	9.00
	Transportation and Communication	
6e	Carfare	20.25
7a	Telephone	.50
G—	**Fixed Charges and Contributions**	
5	Advertising	24.90
6	Other Fixed Charges	10.00
	Total Expenditures	$ 3,759.45
	Total Warrants drawn	$ 3,491.38
	Add Miscellaneous Debits	269.57
	Deduct Miscellaneous Credits	1.50
	Claims Outstanding	.....
	Total Encumbrance	$ 3,759.45
	Total Appropriation	$ 3,759.45

SPECIAL APPROPRIATIONS AND EXPENDITURES FOR THE YEAR ENDING NOVEMBER 30, 1916, NOT CHARGEABLE TO ANY DEPARTMENT OR BUREAU

	Warrants Drawn	Miscellaneous Debits	Miscellaneous Credits	Claims Outstanding	Total Encumbrance	Total Appropriation	Unencumbered Balance	Balance Carried Forward
Advertising	$ 5,125.88				$ 5,125.88	$ 10,144.00	$ 5,018.12	
Annual audit of financial books	2,602.50			$ 1,247.50	3,850.00	3,850.00		
Clean-up Campaign	752.64				752.64	768.00	15.36	
Emergency Fund of the Council	4,811.69				4,811.69	5,000.00	188.31	
Furnishing Municipal Jail	3,424.60			1,178.03	4,602.63	4,602.63		
Purchase of Fire Insurance Block Books	342.00				342.00	350.00	8.00	
Fourth of July Committee—donation	1,000.00				1,000.00	1,000.00		
Hillside Boulevard expense	1,000.00				1,000.00	1,000.00		
Incidental expense, cash advanced	50.00				50.00	50.00		
Judgment against the City	2,935.40				2,935.40	2,969.10	33.70	
Municipal Lodging House	4,939.50	56.40			4,995.90	4,995.90		
Printing Mayor's Message for 1914	1,854.50				1,854.50	1,854.50		
Printing Mayor's Message for 1915						2,000.00		2,000.00
National Guard Entertainment	350.00				350.00	350.00		
Oregon Humane Society—expense	11,016.84				11,016.84	14,000.00	2,983.16	
Premium on employes' bonds	1,513.90				1,513.90	1,513.90		
Pisgah Home Colony Association—donation	1,950.00				1,950.00	1,950.00		
Purchase of property for delinquent assessm'ts						590.03		590.03
Purchase of property for delinquent assessm'ts	30,194.61				30,194.61	33,000.00		2,805.39
Premium on insurance	546.50				546.50	546.50		
Payment of prior year claims	164.56				164.56	305.96	141.40	
Purchase of Press badges	37.50				37.50	37.50		
Prohibition Act—refunds to State	4,757.50				4,757.50	4,757.50		
Purchase of Street and Sewer warrants	9,183.43				9,183.43	9,183.43		
Purchase of Duplicator	110.00				110.00	110.00		
Relief of certain persons	1,770.18		4.68		1,765.50	3,000.00	1,234.50	
Relief of Mrs. J. F. Kraig	240.00				240.00	240.00		
Relief of unemployed	16,061.50	327.16	235.01		16,153.65	18,642.78		2,489.13
Repairs to bridges crossing river	554.44			31.64	586.08	1,715.43	1,129.35	
Refund of taxes	23.27				23.27	876.96		853.69
Refund of vehicle licenses	8.15				8.15	148.90		140.75
Purchase of rights of way	200.00				200.00	200.00		
Rose Festival expense	1,000.00				1,000.00	1,000.00		
Relief of Mrs. Rachel Powers	484.65				484.65	484.65		
Refund of Motor Bus licenses						808.27		808.27
Claims paid, former City of St. Johns	3,006.20				3,006.20	4,547.07	1,540.87	
Transfers to Street and Sewer Interest Fund						5,000.00	5,000.00	
Widening of Powell Street	27.50		5.00		22.50	27.50	5.00	
Widening of 58th Street S. E	34.03				34.03	34.03		
Totals	$ 112,073.47	$ 383.56	$ 244.69	$ 2,457.17	$ 114,669.51	$ 141,654.54	$ 17,297.77	$ 9,687.26

SPECIAL APPROPRIATIONS AND EXPENDITURES FOR THE YEAR ENDING NOVEMBER 30, 1916, NOT CHARGEABLE TO ANY DEPARTMENT OR BUREAU—Continued

	Warrants Drawn	Miscellaneous Debits	Miscellaneous Credits	Claims Outstanding	Total Encumbrance	Total Appropriation	Unencumbered Balance	Balance Carried Forward
Rotary Accounts								
Shop Rotary Account	$ 29,635.90	$ 7,069.14	$ 20.10	$ 414.63	$ 37,099.57	$ 42,551.62	.....	$ 5,452.05
Stationery stock	18,564.73	44.16	.....	2,002.35	20,611.24	24,241.80	.....	3,630.56
Totals	$ 48,200.63	$ 7113.30	$ 20.10	$ 2,416.98	$ 57,710.91	$ 66,793.42	.....	$ 9,082.61
Non-Operating Expense								
Purchase of warrants and certificates	105,717.50	.....	.....	.....	105,717.50	105,717.50	.....	.....

APPROPRIATIONS BROUGHT FORWARD AND WARRANTS DRAWN IN PAYMENT OF CLAIMS AUTHORIZED DURING THE YEAR 1915 FOR EACH DEPARTMENT, BY BUREAUS— DEPARTMENT OF PUBLIC SAFETY

Code Designation		Mayor's Office	Bureau of Fire	Municipal Court	Bureau of Police	Bureau of Health	Pound	Board of Motion Picture Censors
A—	**Personal Service**							
1	Salaries				$ 42.66	$ 254.05		
2	Special Services			$ 71.50				
B—	**Supplies**							
1	Office	$ 5.00	$199.06		65.47	52.82		$ 6.25
2	Fuel		848.17		136.60	2.50		
3	Forage and Veterinary		1,083.23				$ 5.50	
4	Food				394.10	28.75		
5	Cleaning and Disinfecting					80.58		
6	Motor Vehicle		358.48		65.10	70.82		
9	Medical and Surgical					109.88		
10	General Plant		6.86		12.84			
C—	**Material**							
3	Building		241.08		27.36			
4	General Plant		552.35					
D—	**Equipment**							
1	Office				97.80			
5	Motor Vehicles and Equipment		11,950.00		79.17	452.11		
7	Tools		15.97		8.57			
8	General Plant		7,022.70		8.20			
E—	**Contract and Open Order Service**							
1	Construction and Extension				300.00			
	Repairs							
2	General		875.55		87.25	93.31		
3	Motor Vehicle		.58		32.49			
	Light, Heat and Power							
4c	Power					2.84	.50	
5	Janitorial Service			2.00	20.42	12.57		

APPROPRIATIONS BROUGHT FORWARD AND WARRANTS DRAWN IN PAYMENT OF CLAIMS AUTHORIZED DURING THE YEAR 1915 FOR EACH DEPARTMENT, BY BUREAUS— DEPARTMENT OF PUBLIC SAFETY—Continued

Code Designation		Mayor's Office	Bureau of Fire	Municipal Court	Bureau of Police	Bureau of Health	Pound	Board of Motion Picture Censors
	Transportation and Communication							
6a	Hire of Horses and Vehicles					38.00		
6d	Shoeing and Boarding Horses				252.00		12.50	
6f	Other Transportation					6.50		
7a	Telephone				33.95			
7b	Telegraph				31.23			
8	General Plant Service				2.00	266.00		
F—	Contingencies				123.23			
G—	**Fixed Charges and Contributions**							
2	Rent		414.76					
	Total Expenditures	$ 5.00	$ 23,568.79	$ 73.50	$ 1,820.44	$ 1,470.73	$ 18.50	$ 6.25
	Warrants drawn		23,387.18	$ 73.50	$ 1,854.47	$ 1,442.02	$ 19.30	
	Add Miscellaneous Debits	5.00	196.06		65.47	60.01		6.25
	Deduct Miscellaneous Credits		17.45		99.50	31.30	.80	
	Total Encumbrance	$ 5.00	$ 23,568.79	$ 73.50	$ 1,820.44	$ 1,470.73	$ 18.50	$ 6.25
	Total Appropriation	5.00	23,568.79	73.50	1,820.44	1,470.73	18.50	6.25

APPROPRIATIONS BROUGHT FORWARD AND WARRANTS DRAWN IN PAYMENT OF CLAIMS AUTHORIZED DURING THE YEAR 1915 FOR EACH DEPARTMENT, BY BUREAUS— DEPARTMENT OF FINANCE

Code Designation		Office of Treasurer	Municipal Garage	Public Market	Bureau of Purchases and Stores
A—	**Personal Service**				
1	Salaries		$ *1.13		
B—	**Supplies**				
1	Office	$ 102.50		$ 42.50	$ 19.19
2	Fuel		6.00		
6	Motor Vehicle		151.17		
D—	**Equipment**				
1	Office				
8	General Plant		3.60		
E—	**Contract and Open Order Service Repairs**				
2	General	6.25			
	Light, Heat and Power				
4c	Power		5.14		
4d	Heat		4.08		
5	Janitorial Service			10.00	
G—	**Fixed Charges and Contributions**				
2	Rent		*5.00		
	Total Expenditures	$ 108.75	$ 163.86	$ 52.50	$ 19.19
	Warrants drawn	108.75	176.90	10.00	
	Add Miscellaneous Debits			42.50	19.19
	Deduct Miscellaneous Credits		13.04		
	Total Encumbrance	$ 108.75	$ 163.86	$ 52.50	$ 19.19
	Total Appropriation	108.75	163.86	52.50	19.19

*Deduct.

APPROPRIATIONS BROUGHT FORWARD AND WARRANTS DRAWN IN PAYMENT OF CLAIMS AUTHORIZED DURING THE YEAR 1915 FOR EACH DEPARTMENT, BY BUREAUS— DEPARTMENT OF PUBLIC AFFAIRS

Code Designation		Office of Commissioner	Bureau of City Hall	Office of City Attorney	Bureau of Parks	Bureau of Weights & Measures	Free Museum
A—	**Personal Service**						
1	Salaries			$ 45.34	$ 220.28		
B—	**Supplies**						
1	Office			27.82	8.52		
2	Fuel		$ 218.56		57.30		
3	Forage and Veterinary				600.97		
4	Food				119.86		
5	Cleaning and Disinfecting		37.12		65.32		
6	Motor Vehicle				44.46	72.96	
7	Botanical and Agricultural				415.93		
8	Educational and Recreational				2.50		
10	General Plant		10.58		153.90		
C—	**Material**						
1	Highway				257.80		
2	Sewer				199.60		
3	Building				245.45		
4	General Plant				1,291.51		
D—	**Equipment**						
1	Office	$ 40.00		36.81		9.00	
2	Household		26.90		2.94		
5	Motor Vehicles and Equipment				1.34		
6	Educational and Recreational				4.75		
7	Tools				21.09		
8	General Plant						$ 191.50
E—	**Contract and Open Order Service**						
1	Construction and Extension				2,011.07		
	Repairs						
2	General		147.00		235.28		
3	Motor Vehicle				58.50		
	Light, Heat and Power						
4d	Heat		10.54		23.80		
5	Janitorial Service		46.77		66.89		

APPROPRIATIONS BROUGHT FORWARD AND WARRANTS DRAWN IN PAYMENT OF CLAIMS AUTHORIZED DURING THE YEAR 1915 FOR EACH DEPARTMENT, BY BUREAUS— DEPARTMENT OF PUBLIC AFFAIRS—Continued

Code Designation		Office of Commissioner	Bureau of City Hall	Office of City Attorney	Bureau of Parks	Bureau of Weights & Measures	Free Museum
	Transportation and Communication						
6d	Shoeing and Boarding Horses				7.00		
6e	Carfare						
6f	Other Transportation						
7a	Telephone		.85				
7b	Telegraph						
8	General Plant Service		15.50		5.00		
G—	**Fixed Charges and Contributions**						
2	Rent				15.00		
	Total Expenditures	$ 40.00	$ 513.82	$ 109.97	$ 6,136.06	$ 81.96	$ 191.50
	Total Warrants drawn	40.00	513.82	61.34	5,347.78	81.96	191.50
	Add Miscellaneous Debits			48.63	788.28		
	Deduct Miscellaneous Credits						
	Outstanding Claims			1,265.00			
	Total Encumbrance	$ 40.00	$ 513.82	$ 1,374.97	$ 6,136.06	$ 81.96	$ 191.50
	Total Appropriation	40.00	513.82	1,374.97	6,136.06	81.96	191.50

APPROPRIATIONS BROUGHT FORWARD AND WARRANTS DRAWN IN PAYMENT OF CLAIMS AUTHORIZED DURING THE YEAR 1915 FOR EACH DEPARTMENT, BY BUREAUS—DEPARTMENT OF PUBLIC WORKS

Code Designation		
A—	**Personal Service**	
1	Salaries	$ * 614.98
B—	**Supplies**	
1	Office	97.34
2	Fuel	182.00
5	Motor Vehicle	1.89
10	General Plant	243.86
C—	**Material**	
1	Highway	1,396.64
2	Sewer	1,741.12
4	General Plant	2,430.34
D—	**Equipment**	
1	Office	574.82
5	Motor Vehicle	510.61
7	Tools	54.16
8	General Plant	536.00
E—	**Contract and Open Order Service**	
1	Construction and Extension	.....
2	General Repairs	1,998.55
3	Motor Vehicle Repairs	23.38
2	Maintenance	5,215.90
	Light, Heat and Power	
4c	Power	4.65
	Transportation and Communication	
6a	Hire of Horses and Vehicles	687.30
6b	Hire of Automobiles	*7.93
6c	Storage of Motor Vehicles	2.50
6e	Carfare	4.20
7b	Telegraph and Messenger Service	3.21
F—	Contingencies	*151.50
G—	**Fixed Charges and Contributions**	
2	Rent	37.50
	Total Expenditures	$ 14,971.56
	Warrants drawn	16,205.73
	Add Miscellaneous Debits	189.31
	Deduct Miscellaneous Credits	1,423.48
	Total Encumbrance	$ 14,971.56
	Total Appropriation	14,971.56

*Deduct.

APPROPRIATIONS BROUGHT FORWARD AND WARRANTS DRAWN IN PAYMENT OF CLAIMS AUTHORIZED DURING THE YEAR 1915 FOR EACH DEPARTMENT, BY BUREAUS—DEPARTMENT OF PUBLIC UTILITIES

Code Designation		Lighting	Bureau of Street Cleaning	Bureau of Garbage Disposal
A—	**Personal Service**			
1	Salaries			
B—	**Supplies**			
1	Office		$ 7.25	
3	Forage and Veterinary		66.15	
6	Motor Vehicle		89.85	
10	General Plant	*26.25	76.51	
C—	**Material**			
4	General Plant		1.85	
D—	**Equipment**			
4	Motorless Vehicles and Equipment		47.01	
5	Motor Vehicles and Equipment		50.00	
E—	**Contract and Open Order Service**			
1	Construction and Extension		200.00	
	Repairs			
2	General		174.29	
3	Motor Vehicle		10.92	
	Light, Power and Heat			
4a & 4b	Lighting Streets and Buildings	$ 17,146.21		
4c	Power		3.12	7.00
4d	Heat			
	Transportation and Communication			
6d	Shoeing and Boarding Horses		30.00	
F—	Contingencies		*5.25	
	Total Expenditures	$ 17,119.96	$ 751.70	$ 7.00
	Warrants drawn	17,146.21	728.01	7.00
	Add Miscellaneous Debits		28.94	
	Deduct Miscellaneous Credits	26.25	5.25	
	Total Encumbrance	$ 17,119.96	$ 751.70	$ 7.00
	Total Appropriation	17,119.96	751.70	7.00

*Deduct.

APPROPRIATIONS BROUGHT FORWARD AND WARRANTS DRAWN IN PAYMENT OF CLAIMS AUTHORIZED DURING THE YEAR 1915 FOR EACH DEPARTMENT, BY BUREAUS—DEPARTMENT OF AUDITING AND CIVIL SERVICE BOARD

Code Designation		Departm't of Auditing	Civil Service Board
B—	**Supplies**		
1	Office	$ 669.01	$ 24.90
D—	**Equipment**		
1	Office		21.90
E—	**Contract and Open Order Service**		
8	General Plant Service	36.24	
	Total Expenditures	$ 705.25	$ 46.80
	Warrants drawn	$ 322.00	$ 21.90
	Miscellaneous Debits	383.25	24.90
	Total Encumbrance	$ 705.25	$ 46.80
	Total Appropriation	705.25	46.80

SPECIAL APPROPRIATIONS FOR 1915 AND EXPENDITURES DURING 1916

	Warrants Drawn	Total Expenditures	Total Appropriations
Payment of Prior Year Claims	$162.00	$162.00	$162.00
Repairs to Bridges	26.87	26.87	26.87
Purchase of Right of Way	46.00	46.00	46.00
Widening of Powell Street	75.00	75.00	75.00
	$309.87	$309.87	$309.87

RECAPITULATION OF GENERAL FUND — APPROPRIATIONS AND EXPENDITURES BY DEPARTMENTS

	Warrants Drawn	Miscellaneous Debits	Miscellaneous Credits	Total Expenditures	Claims Outstanding	Total Encumbrance	Total Appropriation	Balance of Appropriation
DEPARTMENT OF PUBLIC SAFETY								
Mayor's Office	$ 10,797.90	$ 101.26		$ 10,899.16		$ 10,899.16	$ 10,899.16	
Bureau of Fire	567,497.50	25,972.68	7,266.88	586,203.30	$ 14,633.37	600,836.67	603,486.67	$ 2,650.00
Bureau of Police	378,320.60	3,457.03	99.50	381,678.13	953.33	382,631.46	382,631.46	
Bureau of Health	52,267.59	2,007.89	5.88	54,269.60	1,985.55	56,255.15	56,255.15	
Municipal Court	8,588.60	187.44		8,776.04		8,776.04	8,776.04	
Bureau of Pound	2,221.81	9.00		2,230.81		2,230.81	2,230.81	
Board of Motion Picture Censors	1,079.60	86.94		1,166.54		1,166.54	1,166.54	
Totals	$1,020,773.60	$ 31,822.24	$ 7,372.26	$1,045,223.58	$ 17,572.25	$1,062,795.83	$1,065,445.83	$ 2,650.00
DEPARTMENT OF FINANCE								
Office of Commissioner	$ 6,022.50	$ 32.05		$ 6,054.55	$ 6.50	$ 6,061.05	$ 6,061.05	
Bureau of Licenses	1,824.75	145.99		1,970.74	199.50	2,170.24	2,170.24	
Office of Treasurer	21,336.35	675.44		22,011.79	46.60	22,058.39	22,058.39	
Municipal Garage	5,857.46	766.13	$ 707.42	5,916.17	471.65	6,387.82	6,387.82	
Public Market	2,593.02	111.97		2,704.99	36.00	2,740.99	2,740.99	
Bureau of Purchases	9,474.46	298.11	61.88	9,710.69	112.10	9,822.79	9,822.79	
City Store House	600.00	49.94		649.94		649.94	649.94	
Shop Equipment	879.32	37.80		917.12	77.50	994.62	994.62	
Debt Service	3,581.02			3,581.02		3,581.02	3,581.02	
Totals	$ 52,168.88	$ 2,117.43	$ 769.30	$ 53,517.01	$ 949.85	$ 54,466.86	$ 54,466.86	
DEPARTMENT OF PUBLIC AFFAIRS								
Office of Commissioner	$ 7,655.08	$ 109.90		$ 7,764.98	$ 53.99	$ 7,818.97	$ 7,818.97	
Bureau of Parks	210,755.54	4,610.88	$ 781.29	214,585.13	2,675.86	217,260.99	217,260.99	
Office of City Attorney	23,077.38	394.95		23,472.33		23,472.33	23,472.33	
Bureau of City Hall	18,518.87	69.67		18,588.54	412.81	19,001.35	19,001.35	
Bureau of Weights and Measures	3,088.48	128.58		3,217.06	31.05	3,248.11	3,248.11	
Bureau of Public Employment	8,386.21	459.52		8,845.73	167.36	9,013.09	9,013.09	
Bureau of Free Museum	279.47	2.72		282.19	110.00	392.19	392.19	
Municipal Reference Library		24.01		24.01		24.01	24.01	
Totals	$ 271,761.03	$ 5,800.23	$ 781.29	$ 276,779.97	$ 3,451.07	$ 280,231.04	$ 280,231.04	

RECAPITULATION OF GENERAL FUND—APPROPRIATIONS AND EXPENDITURES BY DEPARTMENTS—Continued

	Warrants Drawn	Miscellaneous Debits	Miscellaneous Credits	Total Expenditures	Claims Outstanding	Total Encumbrance	Total Appropriation	Balance of Appropriation
DEPARTMENT OF PUBLIC UTILITIES								
Office of Commissioner	$ 9,631.80	$ 88.84	.....	$ 9,720.64	.....	$ 9,720.64	$ 9,720.64	.....
Lighting Streets and Public Buildings	177,320.65	30.77	$ 62.12	177,289.30	20,000.00	197,289.30	197,289.30	.....
Motor Bus Inspector	1,100.00	78.85	.....	1,178.85	16.10	1,194.95	1,194.95	.....
Bureau of Street Cleaning	245,506.94	4,405.94	388.22	249,524.66	1,339.25	250,863.91	250,863.91	.....
Bureau of Garbage Disposal	22,349.75	87.30	.....	22,437.05	15.50	22,452.55	22,452.55	.....
Totals	$ 455,909.14	$ 4,691.70	$ 450.34	$ 460,150.50	$ 21,370.85	$ 481,521.35	$ 481,521.35	.....
DEPARTMENT OF PUBLIC WORKS	$ 345,314.56	$ 7,931.38	$ 8,649.55	$ 344,596.39	$ 8,961.13	$ 353,557.52	$ 361,525.21	$ 7,967.69
DEPARTMENT OF AUDITING	$ 42,970.34	$ 1,398.23	$ 64.45	$ 44,304.12	$ 487.73	$ 44,791.85	$ 44,791.85	.....
CIVIL SERVICE BOARD	$ 3,491.38	$ 269.57	$ 1.50	$ 3,759.45	.....	$ 3,759.45	$ 3,759.45	.....
SPECIAL APPROPRIATIONS	$ 112,073.47	$ 383.56	$ 244.69	$ 112,212.34	$ 2,457.17	$ 114,669.51	$ 141,654.54	$ 26,985.03
ROTARY ACCOUNTS	$ 48,200.63	$ 7,113.30	$ 20.10	$ 55,293.83	$ 2,416.98	$ 57,710.81	$ 66,793.42	$ 9,082.61
NON-OPERATING EXPENSE	$ 105,717.50	.....	.....	$ 105,717.50	.....	$ 105,717.50	$ 105,717.50	.....

APPROPRIATIONS BROUGHT FORWARD FROM 1915 BY BUREAUS

	Warrants Drawn	Miscellaneous Debits	Miscellaneous Credits	Total Expenditures	Claims Outstanding	Total Encumbrance	Total Appropriation	Balance of Appropriation
Mayor's Office		$ 5.00		$ 5.00		$ 5.00	$ 5.00	
Bureau of Fire	$ 23,387.18	199.06	$ 17.45	23,568.79		23,568.79	$ 23,568.79	
Municipal Court	73.50			73.50		73.50	73.50	
Bureau of Police	1,854.47	65.47	99.50	1,820.44		1,820.44	1,820.44	
Bureau of Health	1,442.02	60.01	31.30	1,470.73		1,470.73	1,470.73	
Bureau of Pound	19.30		.80	18.50		18.50	18.50	
Board of Motion Picture Censors		6.25		6.25		6.25	6.25	
Office of Treasurer	108.75			108.75		108.75	108.75	
Municipal Garage	176.90		13.04	163.86		163.86	163.86	
Public Market	10.00	42.50		52.50		52.50	52.50	
Bureau of Purchases and Stores		19.19		19.19		19.19	19.19	
Commissioner of Public Affairs	40.00			40.00		40.00	40.00	
Bureau of City Hall	513.82			513.82		513.82	513.82	
Office of City Attorney	61.34	48.63		109.97	1,265.00	1,374.97	1,374.97	
Bureau of Parks	5,347.78	788.28		6,136.06		6,136.06	6,136.06	
Bureau of Weights and Measures	81.96			81.96		81.96	81.96	
Bureau of Free Museum	191.50			191.50		191.50	191.50	
Department of Public Works	16,205.73	189.31	1,423.48	14,971.56		14,971.56	14,971.56	
Lighting Streets and Buildings	17,146.21		26.25	17.119.96		17,119.96	17,119.96	
Bureau of Street Cleaning	728.01	28.94	5.25	751.70		751.70	751.70	
Bureau of Garbage Disposal	7.00			7.00		7.00	7.00	
Department of Auditing	322.00	383.25		705.25		705.25	705.25	
Civil Service Board	21.90	24.90		46.80		46.80	46.80	
Special Appropriation	309.87			309.87		309.87	309.87	
Totals	$ 68,049.24	$ 1,860.79	$ 1,617.07	$ 68,292.96	$ 1,265.00	$ 69,557.96	$ 69,557.96	

GRAND RECAPITULATION OF GENERAL FUND—APPROPRIATIONS AND EXPENDITURES

	Warrants Drawn	Miscellaneous Debits	Miscellaneous Credits	Total Expenditures	Claims Outstanding	Total Encumbrance	Total Appropriation	Balance of Appropriation
Department of Public Safety	$1,020,773.60	$ 31,822.24	$ 7,372.26	$1,045,223.58	$ 17,572.25	$1,062,795.83	$1,065,445.83	$ 2,650.00
Department of Finance	52,168.88	2,117.43	769.30	53,517.01	949.85	54,466.86	54,466.86	.....
Department of Public Affairs	271,761.03	5,800.23	781.29	276,779.97	3,451.07	280,231.04	280,231.04	.....
Department of Public Utilities	455,909.14	4,691.70	450.34	460,150.50	21,370.85	481,521.35	481,521.35	.....
Department of Public Works	345,314.56	7,931.38	8,649.55	344,596.39	8,961.13	353,557.52	361,525.21	7,967.69
Department of Auditing	42,970.34	1,398.23	64.45	44,304.12	487.73	44,791.85	44,791.85	.....
Civil Service Board	3,491.38	269.57	1.50	3,759.45	.....	3,759.45	3,759.45	.....
Special Appropriations	112,073.47	383.56	244.69	112,212.34	2,457.17	114,669.51	141,654.54	26,985.03
Rotary Accounts	48,200.63	7,113.30	20.10	55,293.83	2,416.98	57,710.81	66,793.42	9,082.61
Non-Operating Expense	105,717.50	.....	.....	105,717.50	.....	105,717.50	105,717.50	.....
Prior Year Accounts	68,049.24	1,860.79	1,617.07	68,292.96	1,265.00	69,557.96	69,557.96	.....
Totals	$2,526,429.77	$ 63,388.43	$ 19,970.55	$2,569,847.65	$ 58,932.03	$2,628,779.68	$2,675,465.01	$ 46,685.33

BONDED INDEBTEDNESS INTEREST FUND

Balance December 1, 1915	$.....	$ 105,193.65
Receipts—		
Taxes 1916	305,553.80	
Delinquent taxes	8,651.23	
Accrued Interest on Auditorium Bonds	816.11	
Refund Acc't Interest Coupons Paid in Error.	60.00	315,081.14
Transfers—		
Special Tax Fund 1916	284.05	
General Fund	2,200.00	2,484.05
		$ 422,758.84
Disbursements—		
Interest Coupons Paid	291,282.50	
Warrants Paid Account Commission	118.00	291,400.50
Transfers—		
Water Fund	120.00	
General Fund	2,200.00	
Chemical National Bank, New York	33,400.00	
Hanover National Bank, New York	180.00	
Harris, Forbes & Co., New York	3,000.00	38,900.00
Balance November 30, 1916	.....	92,458.34
		$ 422,758.84

APPROPRIATION PAYMENT OF INTEREST

Appropriation Brought Forward	$ 12,725.00	
Appropriation 1916	328,628.50	$ 341,353.50
Interest Paid and Warrants Drawn—		
Warrants Drawn Account Commission	128.50	
Interest Coupons Paid	291,282.50	
Transferred to New York Accounts	36,580.00	327.991.00
Balance carried forward	.....	13,362.50
		$ 341,353.50

CHEMICAL NATIONAL BANK, NEW YORK

Balance December 1, 1915	.....	$ 4,475.00
Receipts:		
Transferred from Bonded Indebtedness Fund	.....	33,400.00
		$ 37,875.00
Disbursements:		
Interest Coupons Paid	.....	$ 33,575.00
Balance November 30, 1916	.....	4,300.00
		$ 37,875.00

HARRIS, FORBES & CO., NEW YORK

Balance December 1, 1915	.....	$ 300.00
Receipts:		
Transferred from Bonded Indebtedness Fund	.....	3,000.00
		$ 3,300.00
Disbursements:		
Interest Coupons Paid	$ 1,710.00	
Transferred to E. Portland Water Account	60.00	$ 1,770.00
Balance November 30, 1916	.....	1,530.00
		$ 3,300.00

HANOVER NATIONAL BANK, NEW YORK

Balance December 1, 1915	.....	$ 180.00
Receipts:		
Transferred from Bonded Indebtedness Inter-Fund	.....	180.00
		$ 360.00
Disbursements:		
Balance November 30, 1916	.....	$ 360.00
		$ 360.00

SINKING FUND

Balance December 1, 1915	$.....	$ 29,698.86
Receipts:		
Taxes, 1916	111,516.01	
Delinquent Taxes	3,322.09	
Interest on Improvement Bonds	28,197.90	
Interest on Water Bonds	5,540.00	
Interest on Daily Balances	508.92	
Interest on Crematory Bonds	1,885.00	
Crematory Bonds Cashed	5,800.00	
Interest on Street Extension Bonds	824.22	
Street Extension Bonds Cashed	3,805.50	161,399.64
Transfers:		
Special Tax Fund, 1916	$ 103.67	
Water Bond Sinking Fund	650.00	$ 753.67
		$ 191,852.17
Disbursements:		
Warrants Paid and Returned	$ 118,203.33	
Redemption of St. Johns' City Hall Bonds	10,000.00	$ 128,203.33
Balance November 30, 1916	.....	63,648.84
		$ 191,852.17

APPROPRIATION PURCHASE OF SECURITIES

Appropriation Brought Forward	$ 28,612.51	
Appropriation 1916	175,000.00	$ 203,612.51
Claims Audited and Warrants Drawn:		
Purchase of Securities	$ 182,021.98	
Balance of Appropriation Carried Forward	21,590.53	$ 203,612.51

APPROPRIATION REDEMPTION OF BONDS

Appropriation, 1916	.....	$ 10,000.00
St. Johns' City Hall Bonds Redeemed	.....	$ 10,000.00

SPECIAL BRIDGE FUND

Balance December 1, 1915	$.....	$ 21,923.70
Receipts:		
Taxes, 1916	60,497.41	
Delinquent Taxes	655.06	61,152.47
Transfers:		
General Fund	$ 81.44	
Special Tax Fund	56.24	
Street Improvement Fund	51.58	189.26
		$ 83,265.43
Disbursements:		
Warrants Paid and Returned	$ 11,893.08	
Transferred to General Fund	1,381.67	$ 13,274.75
Balance November 30, 1916	.....	69,990.68
		$ 83,265.43

APPROPRIATION ELIMINATION OF GRADE CROSSINGS

Appropriation Brought Forward	$ 20,399.53	
Appropriation, 1916	65,045.14	$ 85,444.67
Claims Audited and Warrants Drawn:		
a—Personal Service	$ 11,314.42	
b—Supplies	1,508.23	
c—Material	99.94	
d—Equipment	252.63	
e2—Repairs	26.00	
e6e-e6f-e7b—Transportation and Communication	149.28	
e8—General Plant Service	235.90	
g5—Advertising	397.66	$ 13,984.06
Warrants Drawn During Year	$ 12,526.06	
Add Miscellaneous Debits	1,381.67	
Deduct Miscellaneous Credits	81.44	
Outstanding Claims	157.77	
Unexpended Balance	71,460.61	$ 85,444.67

WATER FUND

Balance December 1, 1915	$.....	$ 136,175.68
Receipts:		
Collection of Water Rates	764,215.90	
Collection of St. Johns' Water Rates	263.00	
Interest on Daily Balances	4,078.36	
Rent—Portland Lumber Co.	125.00	
Multnomah County—Services	19.50.	
Refunds:		
Gerlinger Motor Car Co. $ 3.67		
Standard Oil Co. 12.47	16.14	
Port. & Ore. City Ry., Removing Hydrant	26.70	
Shut-off	5.75	
Repairs to Meters	33.50	
Sale of Junk	272.74	
Inspection of Pipe	211.03	
Witness Fees:		
J. Appleman $ 4.70		
E. F. West 2.30	7.00	
Protecting Mains, A. G. Guthrie & Co.	134.00	
Sale of Empty Sacks	93.40	
Repairs to Pipe	13.75	
Removing Mains, S. P. Co.	880.45	
Installing Mains, S. P. Co.	43.58	
Hauling Gates, Giebisch & Joplin	24.23	
Operating Pump, Port. Artificial Ice Co.	8.95	
Making Connections, J. J. McCarthy	9.90	
Setting Meter, N. P. Lbr. Co.	133.35	
Sale of St. Johns' Plant	1,052.00	771,668.23
Sale of Water Bonds, $125,000 at 99.257	.....	124,071.25
Transfers:		
General Fund	$ 2,543.69	
Bonded Indebtedness Interest Fund	120.00	
Water Main Funds	4,989.68	7,653:37
		$1,039,568.53
Disbursements:		
Interest Coupons Paid	$ 302,255.00	
Warrants Paid	575,532.50	$ 877,787.50
Transfers:		
General Fund	$ 7,237.90	
Chase National Bank, New York	3,000.00	
Harris, Forbes & Co., New York	12,000.00	
National Park Bank, New York	8,250.00	30,487.90
Balance November 30, 1916	.....	131,293.13
		$1,039,568.53

CHASE NATIONAL BANK, NEW YORK

Balance December 1, 1915	.....	$ 90.00
Receipts:		
Transferred from Water Fund	.....	3,000.00
		$ 3,090.00
Disbursements:		
Interest Coupons Paid	.....	$ 3,090.00

HARRIS, FORBES & CO., NEW YORK

Balance December 1, 1915	$.....	$ 270.00
Receipts:		
Transferred from Water Fund	12,000.00	
Transferred from E. Portland Light Acct.	60.00	12,060.00
		$ 12,330.00
Disbursements:		
Interest Coupons Paid	.....	$ 6,300.00
Balance November 30, 1916	.....	6,030.00
		$ 12,330.00

NATIONAL PARK BANK, NEW YORK

Balance December 1, 1915	.....	$ 797.50
Receipts:		
Transferred from Water Fund	.....	8,250.00
		$ 9,047.50
Disbursements:		
Interest Coupons Paid	.....	$ 5,967.50
Balance November 30, 1916	.....	3,080.00
		$ 9,047.50

DEPARTMENT OF PUBLIC UTILITIES
BUREAU OF WATER WORKS

	Personal Service	
A-1	Salaries	$ 224,314.81
A-2	Special Services	2,743.34
	Supplies	
B-1	Office	3,357.34
B-2	Fuel	1,467.98
B-3	Forage and Veterinary	1,219.99
B-4	Food	601.28
B-5	Cleaning and Disinfecting	67.14
B-6	Motor Vehicle	2,686.25
B-7	Botanical and Agricultural	.50
B-10	General Plant	789.00
	Material	
C-3	Building	2,678.41
C-4a	Pipe, etc.	31,101.34
C-4b	Sand and Gravel, etc.	1,556.11
C-4c	General Plant	4,406.93
	Equipment	
D-1	Office	547.25
D-2	Household	5.64
D-4	Motorless Vehicles and Equipment	33.31
D-5	Motor Vehicles and Equipment	776.42
D-7	Tools	547.86
D-8	General Plant	8,400.72
	Contract and Open Order Service	
E-1	Construction and Extension	1,896.91
	Repairs	
E-2	General	4,709.54
E-3	Motor Vehicle	2,147.57
	Light, Power and Heat	
E-4b	Lighting	263.82
E-4c	Power	2,445.52
E-4d	Heat	13.60
	Transportation and Communication	
E-6a	Hire of Horses and Vehicles	701.60
E-6b	Hire of Automobiles	*107.39
E-6c	Storage of Motor Vehicles	205.87
E-6d	Shoeing and Board Horses	456.10
E-6e	Car Fare	1,081.10
E-6f	Other Transportation	157.25
E-7a	Telephone	621.06
E-7b	Telegraph and Messenger Service	71.02
F	**Contingencies**	1,728.43
G	**Fixed Charges and Contributions**	
G-1a	Interest on Bonds, Interest Coupons Charged	317,612.50
G-1c	Sinking Fund Installments	146,380.00
G-2	Rent	216.05
G-3	Pensions	355.00
G-5	Advertising	130.74
G-6	Other Fixed Charges	91.50
G-7	Other Contributions—Refund of Deposits	3,366.25
H	Purchase of Property	108,000.00
	Total Current Expense	$ 879,845.66
	Prior Year Claims Paid	13,539.30
		$ 893,384.96
	SUMMARY	
	Total Warants Drawn	$ 572,758.16
	Miscellaneous Debits	3,014.30
	Interest Coupons Paid	317,612.50
	Claims Outstanding	13,439.91
	Total Encumbrance	$ 906,824.87
	Total Appropriation	1,205,606.54
	Unencumbered Balance, Canceled	$ 298,781.67

*Credit.

DEPARTMENT OF PUBLIC UTILITIES
Claims authorized during 1915, paid during 1916

A	**Personal Service**	
A-1	Salaries	$ *66.55
A-2	Special Services	52.20
B	**Supplies**	
B-1	Office	445.28
B-4	Food	224.10
B-6	Motor Vehicle	35.34
B-10	General Plant	105.40
C	**Material**	
C-3	Building	68.31
C-4	General Plant	44.35
D	**Equipment**	
D-1	Office	80.00
D-4	Motorless Vehicles and Equipment	2.20
D-7	Tools	33.05
D-8	General Plant	6,985.82
E	**Contract and Open Order Service Repairs**	
E-2	General	5,389.78
	Light, Power and Heat	
E-4d	Heat	2.07
	Transportation and Communication	
E-6b	Hire of Automobiles	*8.25
E-6d	Shoeing and Boarding Horses	34.00
F	**Contingencies**	100.00
G	**Fixed Charges and Contributions**	
G-7	Other Contributions—Refunds Deposits	12.20
		$ 13,539.30

*Credit.

WATER BOND SINKING FUND

Balance	$.....	$201,020.87
Receipts:		
Interest on Improvement Bonds	43,241.96	
Interest on Water Bonds	7,940.00	
Interest on Crematory Bonds	1,536.66	
Crematory Bonds cashed	5,000.00	
Crematory Bonds sold	20,000.00	
Improvement Bonds cashed	5,000.00	
Improvement Bonds sold	178,000.00	260,718.62
2% Gross Debt	.....	146,380.00
		$608,119.49
Disbursements:		
Transferred to Sinking Fund	$ 650.00	
Invested in Certificates of Deposit	215,000.00	215,650.00
Balance November 30, 1916	.....	392,469.49
		$608,119.49

APPROPRIATION, PURCHASE OF SECURITIES

Appropriation brought forward	$.....	$ 10,150.87
Appropriation carried forward	.....	10,150.87

REDEMPTION FUND

Balance December 1, 1915	$.....	$ 1,001.19
Receipts:		
Redemption of property	.....	22,725.93
Transfers:		
General Fund	1.40	
Improvement Bond Interest Fund	28.25	29.65
		$ 23,756.77
Disbursements:		
Warrants paid and returned	$.....	$ 22,548.51
Transferred to General Fund	.....	1.39
Balance, November 30, 1916	.....	1,206.87
		$ 23,756.77

APPROPRIATION—REDEMPTION OF CERTIFICATES

Appropriation brought forward	$ 9,674.70	
Appropriation 1916	37,500.00	$ 47,174.70
Claims audited and warrants drawn:		
Redemption of Certificates	$ 22,831.56	
Unexpended Balance	24,343.14	$ 47,174.70

BILL POSTING BADGE FUND

Balance December 1, 1915	$.....	$ 241.00
Receipts:		
Sale of badges	.....	131.00
		$ 372.00
Disbursements:		
Badges redeemed	$.....	$ 129.00
Balance, November 30, 1916	.....	243.00
		$ 372.00

STREET IMPROVEMENT FUND

Balance December 1, 1915	$.....	$ 28,420.30
Receipts:		
Sale of Bonds	335,295.74	
Collection of Assessments	129,209.25	
Transferred from General Fund	66.10	464,571.09
		$492,991.39
Disbursements:		
Warrants paid and returned	$.....	$468,458.68
Transfers:		
General Fund	4,585.64	
Special Bridge Fund	51.58	
Improvement Bond Sinking Fund	830.28	5,467.50
Balance November 30, 1916	.....	19,065.21
		$492,991.39

SEWER FUND

Balance December 1, 1915	$.....	$ 12,202.68
Receipts:		
Sale of Bonds	164,345.11	
Collection of Assessments	89,355.84	
Transferred from General Fund	47.26	253,748.21
		265,950.89
Disbursements:		
Warrants paid and returned	$260,747.59	
Transferred to General Fund	220.22	$260,967 81
Balance November 30, 1916	.....	4,983.08
		$265,950.89

STREET EXTENSION FUND

Balance December 1, 1915	$.....	$ 14,783.20
Receipts:		
Sale of Bonds	13,304.95	
Collection of Assessments	14,182.51	27,487.46
		$ 42,270.66
Disbursements:		
Warrants paid and returned	11,204.05	
Transferred to General Fund	17,393.97	$ 28,598.02
Balance November 30, 1916	.....	13,672.64
		$ 42,270.66

STARK STREET EXTENSION FUND

Balance December 1, 1915	$.....	$ 500.00
Disbursements:		
Warrants paid and returned	461.41	
Transferred to General Fund	38.59	500.00

WATER MAIN FUND

Balance December 1, 1915	$.....	$ 4,838.98
Receipts:		
Collection of Assessments	.....	150.70
		$ 4,989.68
Disbursements:		
Transferred to Water Fund	.....	$ 4,989.68

STREET AND SEWER INTEREST FUND

Balance December 1, 1915	$.....	$ 889.04
Receipts:		
Interest collected on Assessments	12,861.13	
Transferred from General Fund	2,500.00	15,361.13
		$ 16,250.17
Disbursements:		
Interest paid on Street and Sewer Warrants.	$ 13,065.02	
Warrants paid and returned	92.62	$ 13,157.64
Balance November 30, 1916	.....	3,092.53
		$ 16,250.17

IMPROVEMENT BOND SINKING FUND

Balance December 1, 1915	$.....	$ 200,382.06
Receipts:		
Collections on Bonded Assessments	1,528,765.69	
Sale of Bonds	34.60	1,528,800.29
Certificates of Deposit cashed	.....	240,737.55
Transfers:		
General Fund	245.07	
Improvement Bond Interest Fund	289.48	
Street Improvement Funds	830.28	1,364.83
		$1,971,284.73
Disbursements:		
Improvement Bonds redeemed	$1,239,537.40	
Warrants paid and returned	1,899.73	1,241,437.13
Invested in Certificates of Deposit	.....	240,737.55
Transferred to Improvement Bond Sinking Fund of St. Johns	.....	6.53
Balance November 30, 1916	.....	489,103.52
		$1,971.284.73

IMPROVEMENT BOND INTEREST FUND

Balance December 1, 1915	$.....	$ 9,753.58
Receipts:		
Interest on Bonded Assessments	674,952.49	
Interest on Daily Balances	6,348.91	
Interest on Certificate of Deposit	3,962.90	
Interest Coupons returned	45.00	
Penalties on Assessments	1,335.15	686,644.45
Transfers:		
General Fund	$128,101.61	
Improvement Bond Interest Fund of St. Johns	1,762.14	129,863.75
		$826,261.78
Disbursements:		
Interest paid on Improvement Bonds	$808,189.41	
Warrants paid and returned	980.60	$809,170.01
Transfers:		
Improvement Bond Sinking Fund	289.48	
Redemption Fund	28.25	
National Park Bank, New York	14,793.45	15,111.18
Balance November 30, 1916	.....	1,980.59
		$826,261.78

NATIONAL PARK BANK, NEW YORK

Balance December 1, 1915	$.....	$ 2,367.28
Receipts:		
Transfers:		
Improvement Bond Interest Fund	14,793.45	
Improvement Bond Sinking Fund of St. Johns	15,500.00	30,293.45
		$ 32,660.73
Disbursements:		
Interest Coupons paid	10,365.00	
St. Johns Improvement Bonds redeemed	15,500.00	$ 25,865.00
Balance November 30, 1916	.....	6,795.73
		$ 32,660.73

IMPROVEMENT BOND SINKING FUND—ST. JOHNS

Balance December 1, 1915	$.....	$ 9,988.60
Receipts:		
Collection of Bonded Assessments	32,180.07	
Transfer from Improvement Bond Sinking Fund	6.53	32,186.60
		$ 42,175.20
Disbursements:		
Improvement Bonds redeemed	$ 10,000.00	
Transferred to National Park Bank, N. Y.	15,500.00	
Balance November 30, 1916	.....	16,675.20
		$ 42,175.20

IMPROVEMENT BOND INTEREST FUND—ST. JOHNS

Balance December 1, 1915	$.....	$ 987.15
Receipts:		
Premium on Bonds sold	702.99	
Accrued Interest on Bonds	72.00	774.99
		$ 1,762.14
Disbursements:		
Transferred to Improvement Bond Interest Fund	.....	1,762.14

IMPROVEMENT BOND SINKING FUND—LINNTON

Balance December 1, 1915	$.....	$ 6.57
Receipts:		
Collection of Bonded Assessments	.....	1,642.75
Balance November 30, 1916	.....	$ 1,649.32

STREET EXTENSION BOND SINKING FUND

Balance December 1, 1915	$.....	$ 1,308.78
Receipts:		
Collection of Bonded Assessments	.....	3,179.66
		$ 4,488.44
Disbursements:		
Street Extension Bonds redeemed	$.....	$ 3,805.50
Balance November 30, 1916	.....	682.94
		$ 4,488.44

STREET EXTENSION BOND INTEREST FUND

Balance December 1, 1915	$.....	$ 24.08
Interest collected on Assessments	.....	805.33
		$ 829.41
Disbursements:		
Interest paid on Street Extension Bonds	.....	$ 797.28
Balance November 30, 1916	.....	32.13
		$ 829.41

PUBLIC AUDITORIUM FUND

Balance December 1, 1915	$.....	$ 14,673.07
Receipts:		
Interest on Daily Balances	6,689.33	
Sale of Bonds, $565,000 at 98.44	556,186.00	562,875.33
		$577,548.40
Disbursements:		
Warrants paid and returned	$125,435.65	
Transferred to General Fund	983.84	
Invested in Certificate of Deposit	30,000.00	$156,419.49
Balance November 30, 1916	.....	421,128.91
		$577,548.40

APPROPRIATION CONSTRUCTION PUBLIC AUDITORIUM

Appropriation brought forward	$ 7,818.67	
Appropropriation 1916	563,186.00	$571,004.67
Claims audited and warrants drawn:		
Architects fees, etc	$129,735.65	
Miscellaneous Debits	983.84	
Unexpended Balance	440,285.18	$571,004.67

PUBLIC LIBRARY FUND

Balance December 1, 1915	$.....	$ 9.54
Receipts:		
Delinquent Taxes	.....	6.74
		$ 16.28
Disbursements:		
Balance November 30, 1916	.....	$ 16.28

APPROPRIATION EXPENSE LIBRARY

Appropriation brought forward	$.....	$ 1,206.08
Claims audited and warrants drawn:		
R. L. Sabin, Treasurer Library Ass'n	16.28	
Unexpended Balance carried forward	1,189.80	$ 1,206.08

POLICE AND FIRE DEPARTMENT RELIEF FUND

Balance December 1, 1915	$.....	$ 25.35
Balance November 30, 1916	.....	$ 25.35

WATER FUND BOND ACCOUNT

Balance December 1, 1915	$.....	$ 22.95
Balance November 30, 1916	.....	$ 22.95

PARK AND BOULEVARD FUND

Balance December 1, 1915	$.....	$ 2,346.75
Disbursements:		
Warrants paid and returned	$2,026.98	
Balance November 30, 1916	319.77	$ 2,346.75

APPROPRIATION, PURCHASE OF PARKS AND ESTABLISHMENT OF BOULEVARDS

Appropriation brought forward	$.....	$ 2,147.77
Claims audited and warrants drawn:		
Retaining Wall	1,828.00	
Unexpended Balance carried forward	319.77	$ 2,147.77

FIRE BOAT AND FIRE MAINS FUND

Balance December 1, 1915	$.....	$ 108.03
Balance November 30, 1916	.....	$ 108.03

BROADWAY BRIDGE FUND

Balance December 1, 1915	$.....	$ 6,075.19
Balance November 30, 1916	.....	$ 6,075.19

APPROPRIATION CONSTRUCTION BROADWAY BRIDGE

Appropriation brought forward	$.....	$ 92.45
Unexpended balance carried forward	.....	$ 92.45

APPROPRIATION EXPENSE FIREPROOFING BROADWAY BRIDGE

Appropriation brought forward	$.....	$ 5,800.74
Unexpended balance carried forward	.....	$ 5,800.74

MT. HOOD RAILWAY AND POWER COMPANY, DEPOSIT FUND

Balance December 1, 1915	$.....	$ 1,000.00
Disbursements:		
Warrants paid and returned	.....	$ 1,000.00

APPROPRIATION PURCHASE OF BONDS

Appropriation brought forward	$.....	$ 1,000.00
Appropriation canceled	.....	$ 1,000.00

APPROPRIATION PAYMENT OF FRANCHISE

Appropriation 1916	$.....	$ 1,000.00
Claims audited and warrants drawn:		
Payment of Franchise	.....	$ 1,000.00

MT. HOOD RAILWAY & POWER COMPANY, STREET REPAIR FUND

Balance December 1, 1915	$.....	$ 1,000.00
Balance November 30, 1916	.....	$ 1,000.00

BONDED INDEBTEDNESS SINKING FUND

Balance December 1, 1915	$.....	$ 824.74
Receipts:		
Interest on Improvement Bonds	.....	180.00
		$ 1,004.74
Balance November 30, 1916	.....	$ 1,004.74

APPROPRIATION PURCHASE OF BONDS

Appropriation brought forward	$.....	$ 986.00
Appropriation 1916	.....	18.74
		$ 1,004.74
Unexpended balance carried forward	.....	$ 1,004.74

POLICE RELIEF FUND

Balance December 1, 1915	$.....	$ 4,969.24
Receipts:		
Dues	1,785.00	
Interest on Improvement Bonds	331.44	
Interest on Daily Balances	184.99	2,301.43
		$ 7,270.67
Disbursements:		
Warrants paid and returned	$ 1,327.01	
Balance November 30, 1916	5,943.66	$ 7,270.67

APPROPRIATION PAYMENT OF SICK BENEFITS

Appropriation brought forward	$.....	$ 1,574.72
Claims audited and warrants drawn:		
Sick Benefits paid	1,280.08	
Pensions paid	120.00	
Unexpended balance carried forward	174.64	$ 1,574.72

APPROPRIATION PURCHASE OF BONDS

Appropriation brought forward	$.....	$ 4,600.00
Unexpended balance carried forward	.....	$ 4,600.00

SPECIAL TAX FUND, 1916

Balance December 1, 1915	$.....	$ 2,303.21
Receipts:		
Taxes	.....	3.42
		$ 2,306.63
Disbursements:		
Warrants paid and returned	.....	181.42
Transfers:		
General Fund	1,681.25	
Bonded Indebtedness Interest Fund	284.05	
Sinking Fund	103.67	
Special Bridge Fund	56.24	2,125.21
		$ 2,306.63

APPROPRIATION DISTRIBUTION OF 1916 TAX

Appropriation 1916	$.....	$ 181.42
Claims audited and warrants drawn:		
Distribution of taxes	.....	$ 181.42

SPECIAL TAX FUND, 1917

Receipts:		
1917 taxes collected in advance	$ 1,711.16	
Interest on daily balances	10.34	$ 1,721.50
Disbursements:		
Balance November 30, 1916	.....	$ 1,721.50

IMPROVEMENT BOND SINKING AND IMPROVEMENT BOND INTEREST FUND

Balance December 1, 1915	$.....	$ 21.12
Receipts:		
Collection of assessments	.....	35.07
		$ 56.19
Disbursements:		
Balance November 30, 1916	.....	$ 56.19

RECAPITULATION OF APPROPRIATIONS AND EXPENDITURE BY FUNDS

	Warrants Drawn	Interest Paid	Miscellaneous Debits	Miscellaneous Credits	Total Expenditures	Claims Outstanding	Total Encumbrance	Total Appropriation	Balance of Appropriation
General Fund—									
Expenditures	$2,526,429.77		$ 63,388.43	$ 19,970.55	$2,569,847.65	$ 58,932.03	$2,628,779.68	$2,675,465.01	$ 46,685.33
Bonded Indebtedness Interest Fund—									
Payment of Interest	128.50	291,282.50	36,580.00		327,991.00		327,991.00	341,353.50	13,362.50
Sinking Fund—									
Purchase of Securities	182,021.98				182,021.98		182,021.98	203,612.51	21,590.53
Redemption of Bonds			10,000.00		10,000.00		10,000.00	10,000.00	
Special Bridge Fund—									
Elimination of Grade Crossings	12,526.06		1,381.67	81.44	13,826.29	157.77	13,984.06	85,444.67	71,460.61
Water Fund—									
Expense—Bureau Water Works	572,758.16	325,505.00	3,014.30		901,277.46	5,547.41	906,824.87	1,205,606.54	298,781.67
Water Bond Sinking Fund—									
Purchase of Securities								10,150.87	10,150.87
Redemption Fund—									
Redemption of Certificates	22,831.56				22,831.56		22,831.56	47,174.70	24,343.14
Public Auditorium Fund—									
Construction of Auditorium	129,735.65		983.84		130,719.49		130,719.49	571,004.67	440,285.18
Public Library Fund—									
Expense of Library	16.28				16.28		16.28	1,206.08	1,189.80
Park and Boulevard Fund—									
Purchase of Parks and Establishment of Boulevards	1,828.00				1,828.00		1,828.00	2,147.77	319.77
Broadway Bridge Fund—									
Construction Broadway Bridge								92.45	92.45
Fireproofing Broadway Bridge								5,800.74	5,800.74
Mt. Hood Ry. & Power Co.—Deposit Fund—									
Purchase of Bonds								1,000.00	1,000.00
Payment of Franchise	1,000.00				1,000.00		1,000.00	1,000.00	
Bonded Indebtedness Sinking Fund—									
Purchase of Bonds								1,004.74	1,004.74
Police Relief Fund—									
Payment of Sick Benefits	1,400.08				1,400.08		1,400.08	1,574.72	174.64
Purchase of Bonds								4,600.00	4,600.00
Special Tax Fund, 1916—									
Distribution of 1916 tax	181.42				181.42		181.42	181.42	
Grand Total	$3,450,857.46	$ 616,787.50	$ 115,348.24	$ 20,051.99	$4,162,941.21	$ 64,637.21	$4,227,578.42	$5,168,420.39	$ 940,841.97

TRIAL BALANCE—NOVEMBER 30, 1916

City of Portland	$30,286,473.85	$.....
Bonds	.....	17,748,500.00
Improvement Bonds	.....	12,531,421.77
Street Extension Bonds	.....	20,838.23
Improvements Bonds former City of St. Johns	.....	284,090.35
Improvement Bonds former town of Linnton	.....	24,999.53
Street and Sewer Warants	78,376.03	.....
Wm. Adams, Treasurer, General Account	2,073,379.68	.....
Improvement Bond Sinking and Improvement Bond Interest Fund	.....	56.19
Wm. Adams, Treasurer. Investment Account	1,590,085.35	.....
Water Bond Sinking Fund Investments	.....	764,000.00
Bonded Indebtedness Sink'g Fund Investments	.....	3,000.00
Sinking Fund Investments	.....	785,787.27
Police Relief Fund Investments	.....	7,298.08
Public Auditorium Fund Investments	.....	30,000.00
Certificates of Deposit	245,000.00	.....
Revenue Receivable Taxes 1914	20,803.00	.....
Reserve for loss on Taxes 1914	.....	20,803.00
Revenue Receivable Taxes 1915	42,409.33	.....
Revenue General Fund Taxes 1915	.....	140.92
Revenue Bonded Ind. Int. Fund Taxes 1915	.....	27.60
Revenue Sinking Fund Taxes 1915	.....	10.58
Revenue Special Bridge Fund Taxes 1915	.....	2.34
Reserve for loss on Taxes 1915	.....	42,227.89
John Clark, Chief of Police	355.00	.....
Fugitive Fund	.....	355.00
Public Library Fund	.....	16.28
Appropriation, Public Library Fund	1,189.80	.....
Appropriation, Expense Library	.....	1,189.80
Police and Fire Department Relief Fund	.....	25.35
Water Fund Bond Account	.....	22.95
Park and Boulevard Fund	.....	319.77
Appropriation, Park and Boulevard Fund	319.77	.....
Appropriation, Purchase of Parks and Est. of Boulevards	.....	319.77
Fire Boat and Fire Mains Fund	.....	108.03
Broadway Bridge Fund	.....	6,075,19
Appropriation, Broadway Bridge Fund	5,893.19	.....
Appropriation, Construction Broadway Bridge	.....	92.45
Appropriation, Exp. Fireproofing Broadway Br.	.....	5,800.74
Mt. Hood Ry. & Power Co., St. Repair Fund	.....	1,000.00
Bonded Indebtedness Sinking Fund	.....	1,004.74
Appropriation, Bonded Indebtedness Sink'g Fund	1,004.74	.....
Appropriation, Purchase of Bonds	.....	1,004.74
Police Relief Fund	.....	5,943.66
Appropriation, Police Relief Fund	4,774.64	.....
Appropriation, Payment of Sick Benefits	.....	174.64
Appropriation, Purchase of Bonds	.....	4,600.00
Revenue Receivable Taxes 1916	198,543.35	.....
Revenue General Fund Taxes 1916	.....	117,755.68
Revenue Bonded Indebtedness Interest Fund, Taxes 1916	.....	19,895.16
Revenue Sinking Fund, Taxes 1916	.....	7,260.98
Revenue Special Bridge Fund Taxes 1916	.....	3,939.11
Reserve for loss on Taxes 1916	.....	49,692.42
Special Tax Fund 1917	.....	1,721.50
General Fund	.....	311,613.87
Appropriation, General Fund	88,319.59	.....
Appropriation, Exp. Furnishing Municipal Jail	.....	1,178.03
Appropriation, Relief of Unemployed	.....	2,489.13
Appropriation, Exp. office of City Attorney	.....	1,265.00
Appropriation, Refund of Vehicle Licenses	.....	140.75
Appropriation, Refund of Taxes, Sylvan	.....	853.69
Appropriation, Purchase of property	.....	590.03
Appropriation, Exp. Bureau of Fire	.....	17,283.37
Appropriation, Exp. Bureau of Police	.....	953.33

TRIAL BALANCE—NOVEMBER 30, 1916—Continued

Appropriation, Exp. Bureau of Health	$.....	$ 1,985.55
Appropriation, Exp. Commissioner Public Affairs	.....	53.99
Appropriation, Exp. Bureau of City Hall	.....	412.81
Appropriation, Exp. Free Museum	.....	110.00
Appropriation, Exp. Bureau Weights and Meas.	.....	31.05
Appropriation, Exp. Bureau of Parks	.....	2,675.86
Appropriation, Exp. Public Employment Bureau.	.....	167.36
Appropriation, Exp. Commissioner of Finance	.....	6.50
Appropriation, Exp. office of City Treasurer	.....	46.60
Appropriation, Exp. Bureau of Licenses	.....	199.50
Appropriation, Exp. Bureau of Purchases	.....	112.10
Appropriation, Exp. Municipal Garage	.....	471.65
Appropriation, Exp. Municipal shop equipment	.....	77.50
Appropriation, Exp. Public Market	.....	36.00
Appropriation, Stationery stock	.....	5,632.91
Appropriation, Rotary Shop expense	.....	5,866.68
Appropriation, Exp. Lighting Sts. & Pub. Places	.....	20,000.00
Appropriation, Exp. Motor Bus Inspector	.....	16.10
Appropriation, Exp. Bureau of St. Cleaning	.....	1,339.25
Appropriation, Exp. Bureau Garbage Disposal	.....	15.50
Appropriation, Exp. Dept. of Public Works	.....	16,928.82
Appropriation, Exp. Dept. of Auditing	.....	487.73
Appropriation, Exp. annual audit financial books	.....	1,247.50
Appropriation, Exp. printing Mayor's Message	.....	2,000.00
Appropriation, Exp. repairs to Bridges	.....	31.64
Appropriation, purchase of property, delinquent assessments	.....	2,805.39
Appropriation, refund of Motor Bus Licenses	.....	808.27
Bonded Indebtedness Interest Fund	.....	92,458.34
Appropriation, Bonded Ind. Int. Fund	13,362.50	.....
Appropriation, payment of interest	.....	13,362.50
Chemical National Bank, New York	.....	4,300.00
Harris, Forbes & Co., New York	.....	1,530.00
Hanover National Bank, New York	.....	360.00
Sinking Fund	.....	63,648.84
Appropriation, Sinking Fund	21,590.53	.....
Appropriation, purchase of securities	.....	21,590.53
Special Bridge Fund	.....	69,990.68
Appropriation, Special Bridge Fund	71,618.38	.....
Appropriation, Cost of Fills and Construction of Bridges	.....	71,618.38
Water Fund	.....	131,293.13
Appropriation, Water Fund	5,547.41	.....
Appropriation, Exp. Bureau of Water Works	.....	1,474.91
Appropriation, payment of Int. on Water Bonds	.....	4,072.50
Harris, Forbes & Co., New York	.....	6,030.00
National Park Bank, New York	.....	3,080.00
Water Bond Sinking Fund	.....	392,469.49
Appropriation, Water Bond Sink'g Fund	10,150.87	.....
Appropriation, purchase of securities	.....	10,150.87
Redemption Fund	.....	1,206.87
Appropriation, Redemption Fund	24,343.14	.....
Appropriation, Redemption of Certificates	.....	24,343.14
Bill Posting Badge Fund	.....	243.00
Street Improvement Funds	.....	19,065.21
Sewer Funds	.....	4,983.08
Street Extension Funds	.....	13,672.64
Street and Sewer Interest Funds	.....	3,092.53
Improvement Bond Sinking Fund	.....	489,103.52
Improvement Bond Interest Fund	.....	1,980.59
National Park Bank, New York	.....	6,795.73
Improvement Bond Sink'g Fund, St. Johns	.....	16,675.20
Improvement Bond Sink'g Fund, Linnton	.....	1,649.32
Street Extension Bond Interest Fund	.....	32.13
Street Extension Bond Sinking Fund	.....	682.94
Public Auditorium Fund	.....	421,128.91
Appropriation, Public Auditorium Fund	440,285.18	.....

TRIAL BALANCE—NOVEMBER 30, 1916—Continued

Appropriation, construction Public Auditorium..	$.....	$ 440,285.18
Franchises	.....	1,073.40
Franchise City Messenger and Delivery Co.....	800.00	.....
Franchise Erroll Heights Ry.....	73.40	.....
Franchise Home Tel. & Tel. Co.....	200.00	.....
Wm. Adams, Treasurer, Security Account	2,996,766.74	.....
Bank of California	.....	550,000.00
Geo. W. Bates & Co., Bankers	.....	7,000.00
Citizens Bank	.....	54,000.00
First National Bank	.....	506,286.51
Hibernia Savings Bank	.....	55,000.00
Ladd & Tilton's Bank	.....	392,000.00
Lumbermen's National Bank	.....	315,000.00
Montavilla Savings Bank	.....	10,000.00
Northwestern Electric Co.....	.....	2,000.00
Northwestern National Bank	.....	396,900.00
Peninsula National Bank, of St. Johns	.....	20,000.00
Scandinavian-American Bank	.....	50,000.00
Bank of Sellwood	.....	10,000.00
United States National Bank	.....	537,000.00
First Trust & Savings Bank of St. Johns.....	.....	5,000.00
First National Bank of Linnton	.....	16,500.00
First National Bank of St. Johns	.....	20,080.23
Security Savings & Trust Co.....	.....	50,000.00
	$38,221.665.47	$38,221,665.47

DETAILED STATEMENT OF LICENSES ISSUED AND AMOUNTS RECEIVED FOR FISCAL YEAR 1916

Classification	1915 December		1916 January		1916 February		1916 March		1916 April		1916 May		1916 June	
	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount
Abstracts			10	$ 37.50	4	$ 15.00	3	$ 11.25	14	$ 52.50	3	11.25		
Advertising in Street Ry. Cars					1	250.00								
Amusement Parks, Class 1														
Amusement Parks, Class 2														
Auction Houses, Class 1.	1	$ 40.00	4	160.00			1	40.00	4	160.00	1	40.00	1	40.00
Auctioneers, Class 2.	1	20.00											2	80.00
Automobiles For Hire.														
Banks.			13	237.93	1	60.00	1	60.00	8	184.42	5	45.00	2	67.50
Baths			8	60.00			2	10.00	6	45.00	1	7.50	1	7.50
Bill Posters and Distributors.	2	6.70	2	500.00	2	10.00	2	13.35	1	10.00	7	139.90		
Bowling Alleys.	1	10.00	5	150.00			1	10.00			1	1.65	2	41.65
Brokers, General	1	1.65	32	195.00			5	26.65	16	95.00	9	45.00	2	10.00
Brokers, Stocks on Margin			2	50.00					1	25.00	1	25.00		
Chimney Sweeps.	3	11.00	10	50.00	1	5.00	2	10.00						
Chiropodists	2	3.30	16	80.00	2	8.35	3	11.65	17	85.00	1	3.35		
Collection Agents.	2	21.70	17	172.50	8	80.00	3	30.00	1	10.00	1	10.00		
Dance Hall Registrations.	3	9.75	28	121.25	7	38.00	6	22.50	1	6.25	4	16.25	1	3.25
Dance Permits.	96	69.50	104	74.50	100	55.00	113	56.50	80	65.00	75	46.50	78	39.00
Detective Agencies.	1	100.00	3	300.00			1	25.00						
Dog Breeders.	1	6.00	1	5.00										
Dogs, Male.	249	747.00	108	324.00	128	384.00	140	420.00	105	315.00	71	213.00	20	60.00
Dogs, Female	65	325.00	21	105.00	23	115.00	31	155.00	23	115.00	19	95.00	2	10.00
Electricity for Light and Power.			2	150.00					2	150.00				
Employment Agencies, General	1	50.00	5	250.00					6	300.00	1	200.00		
Employment Agencies, Women only.													2	80.00
Express Systems	2	50.00	1	25.00	1	25.00	2	100.00	3	75.00	1	25.00		
Explosives.			2	30.00	1	5.00			2	20.00	1	5.00		
Firearms and Weapons					2	50.00								
Fire Patrol.					1	50.00								
Gas for Light and Fuel.			1	100.00									1	100.00
Gasoline Filling Stations	5	60.00	35	420.00	2	24.00	13	156.00	7	84.00	10	120.00	4	48.00
Hawkers, Class 1.			7	1,050.00					1	150.00				
Hawkers, Class 2.	1	50.00	8	400.00			1	50.00	9	450.00	1	50.00		
Hawkers, Class 3.	1	16.65												
House Movers.	1	10.00			1	25.00	3	30.00	1	25.00	1	10.00	1	10.00
Insurance and Bonding.	30	126.60	562	2,810.00	120	593.30	44	206.66	568	2,703.33	84	416.65	104	513.31
Junk Wagons.			66	330.00	14	70.00	5	25.00	91	455.00	4	20.00	2	10.00
Laundries.	2	10.00	49	290.00	8	40.00	11	55.00	43	215.00	15	75.00	1	5.00

DETAILED STATEMENT OF LICENSES ISSUED AND AMOUNTS RECEIVED FOR FISCAL YEAR 1916—Continued

Classification	1915 December		1916 January		1916 February		1916 March		1916 April		1916 May		1916 June	
	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount
Mercantile Rating Agencies	....	.....	3	62.50	1	12.50	....	.....	3	62.50	1	12.50	....	.....
Messenger Companies	.....	.....	.....	.....	.....	.....	2	200.00	.....	.....	.....	.....	.....	.....
Milk and Cream, Cans or Carts	13	6.50	36	18.00	32	16.00	22	11.00	35	17.50	24	12.00	17	8.50
Milk and Cream, Creameries	3	15.00	5	25.00	6	30.00	4	20.00	2	10.00	....	.....	....	.....
Milk and Cream, Dairy Wagons	43	107.50	127	317.50	46	115.00	40	100.00	6	15.00	2	5.00	5	12.50
Milk and Cream, Stores, etc.	57	57.00	199	199.00	77	77.00	738	738.00	80	80.00	24	24.00	21	21.00
Baseball Parks	.....	.....	.....	.....	.....	.....	.....	.....	1	100.00	.....	.....	.....	.....
Motor Buses	.....	.....	65	130.00	374	770.25	339	687.50	197	415.75	324	1,338.45	198	963.50
Oil Storage	1	20.00	7	81.00	.....	.....	1	3.00	5	83.00	1	3.00	1	20.00
Oil Tank Vehicles	10	60.00	27	270.00	.....	.....	.....	.....	32	320.00	.....	.....	12	120.00
Pawnbrokers	1	75.00	4	300.00	1	75.00	1	75.00	....	.....	1	75.00	....	.....
Peddlers, Class 1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Peddlers, Class 2	.....	.....	104	1,560.00	12	180.00	17	95.00	144	2,160.00	2	30.00	2	30.00
Peddlers, Class 3	2	5.00	4	30.00	1	2.50	1	7.50	....	.....	....	.....	3	7.50
Peddlers, Class 4	1	5.00	1	5.00	.....	.....	1	5.00	....	.....	....	.....	....	.....
Peddlers, Class 5	1	1.00	2	6.00	1	2.00	.....	.....	1	3.00	.....	.....	.....	.....
Peddlers, Class 6	1	1.65	41	205.00	7	30.05	3	8.30	39	195.00	1	5.00	1	1.65
Pool and Billiard Tables	45	693.35	124	2,825.00	25	268.45	7	43.30	9	35.00	9	55.80	75	1,086.65
Runners	31	144.95	22	110.00	3	10.05	36	164.95	25	125.00	11	40.20	31	124.85
Safe Deposit Vaults	.....	.....	2	20.00	.....	.....	.....	.....	2	20.00	.....	.....	.....	.....
Scavengers	34	100.00	93	279.00	1	3.00	22	66.00	108	324.00	1	3.00	12	36.00
Second Hand	4	20.00	156	780.00	8	40.00	12	60.00	146	730.00	17	85.00	5	25.00
Shooting Galleries	1	10.00	1	25.00	1	16.65	.....	.....	1	25.00	....	.....	1	8.35
Shows and Exhibitions	.....	.....	.....	.....	.....	.....	1	20.00	....	.....	1	270.00	....	.....
Skating Rinks, Ice	....	.....	1	25.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Skating Rinks, Roller	.....	.....	.....	.....	.....	.....	.....	.....	1	25.00	.....	.....	.....	.....
Storage	6	34.86	13	72.50	7	26.00	9	51.86	19	70.00	13	80.36	....	.....
Street Railway Cars	....	.....	71	1,925.00	.....	.....	.....	.....	73	1,825.00	....	.....	....	.....
Street Railway Cars, Freight on	.....	.....	.....	.....	.....	.....	1	10.00	1	50.00	....	.....	....	.....
Telegraph Systems	1	75.00	.....	.....	1	293.40	2	150.00	....	.....	.....	.....	1	75.00
Telephone Systems	.....	.....	2	100.00	.....	.....	.....	.....	1	50.00	1	50.00	....	.....
Theatres	11	158.12	42	863.95	1	9.85	9	84.85	50	957.32	3	84.30	9	144.58
Transient Merchants	.....	.....	.....	.....	.....	.....	.....	.....	1	250.00	.....	.....	.....	.....
Wharfingers	1	120.00	21	460.00	....	.....	2	40.00	8	270.00	17	313.35	....	.....
Wood Saws	....	.....	45	225.00	6	30.00	3	15.00	3	15.00	3	15.00	4	20.00
	738	$ 3,454.78	2340	$ 19,397.10	1038	$ 3,910.35	1686	$ 4,180.82	2002	$ 14,028.57	773	$ 4,123.01	623	$ 3,830.29

DETAILED STATEMENT OF LICENSES ISSUED AND AMOUNTS RECEIVED FOR FISCAL YEAR 1916—Continued

Classification	1916 July		1916 August		1916 September		1916 October		1916 November		Total	
	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount
Abstracts	12	$ 45.00	2	$ 7.50	....	....	11	$ 41.25	2	$ 7.50	61	$ 228.75
Advertising on Street Ry. Cars	....	....	....	....	....	....	....	....	....	....	1	250.00
Amusement Parks, Class 1	....	....	1	300.00	....	....	....	....	....	....	1	300.00
Amusement Parks, Class 2	....	....	1	150.00	....	....	....	....	....	....	1	150.00
Auction Houses, Class 1	4	160.00	....	....	....	....	4	160.00	....	....	20	800.00
Auctioneers, Class 2	....	....	....	....	....	....	1	20.00	....	....	4	120.00
Automobiles For Hire	....	....	....	....	141	339.00	184	1,138.00	147	439.65	472	1916.65
Banks	9	161.59	3	82.70	1	60.00	8	136.04	5	97.50	56	1,192.68
Baths	7	52.50	1	7.50	....	....	6	45.00	2	15.00	34	250.00
Bill Posters and Distributors	....	....	1	6.66	....	....	1	10.00	4	26.64	22	723.25
Bowling Alleys	7	115.00	....	....	....	....	1	5.00	1	5.00	19	338.30
Brokers, General	20	100.00	5	30.00	1	6.65	26	130.00	8	40.00	125	679.95
Brokers, Stocks on Margin	2	50.00	....	....	....	....	1	25.00	1	25.00	8	200.00
Chimney Sweeps	....	....	....	....	2	10.00	....	....	....	....	18	86.00
Chiropodists	19	95.00	1	3.35	2	6.65	18	90.00	4	13.40	79	400.05
Collection Agents	....	....	2	20.00	1	3.35	....	....	....	....	35	347.55
Dance Hall Registrations	....	....	....	....	1	6.25	1	3.25	....	....	52	226.75
Dance Permits	25	33.50	24	13.00	58	39.00	95	89.50	121	60.50	969	641.50
Detective Agencies	....	....	....	....	2	12.50	....	....	....	....	7	437.50
Dog Breeders	....	....	....	....	12	62.00	3	17.00	....	....	17	90.00
Dogs, Male	1	3.00	250	750.00	1461	4,203.00	241	723.00	168	504.00	2941	8,646.00
Dogs, Female	....	....	37	185.00	182	910.00	45	225.00	24	120.00	472	2,360.00
Electricity for Light and Power	2	150.00	....	....	....	....	2	150.00	....	....	8	600.00
Employment Agencies, General	9	1,800.00	1	200.00	....	....	....	....	....	....	23	2800.00
Employment Agencies, Women only	....	....	....	....	....	....	....	....	....	....	2	80.00
Express Systems	4	100.00	....	....	....	....	3	75.00	1	25.00	18	500.00
Explosives	2	15.00	1	5.00	....	....	1	5.00	1	5.00	11	90.00
Firearms and Weapons	....	....	....	....	....	....	....	....	....	....	2	50.00
Fire Patrol	....	....	....	....	....	....	....	....	....	....	1	50.00
Gas for Light and Fuel	....	....	....	....	....	....	....	....	....	....	2	200.00
Gasoline Filling Stations	8	96.00	13	156.00	4	48.00	12	144.00	8	96.00	121	1,452.00
Hawkers, Class 1	1	150.00	....	....	....	....	5	750.00	....	....	14	2,100.00
Hawkers, Class 2	11	550.00	....	....	1	50.00	8	400.00	....	....	40	2,000.00
Hawkers, Class 3	....	....	....	....	....	....	....	....	....	....	1	16.65
House Movers	....	....	2	35.00	1	10.00	....	....	2	20.00	13	175.00
Insurance and Bonding	554	2,770.00	96	480.00	40	193.35	526	2,630.00	106	526.65	2834	13,969.85
Junk Wagons	83	415.00	4	20.00	2	10.00	88	440.00	3	15.00	362	1,810.00
Laundries	49	250.00	10	50.00	1	5.00	45	225.00	14	70.00	248	1,200.00

DETAILED STATEMENT OF LICENSES ISSUED AND AMOUNTS RECEIVED FOR FISCAL YEAR 1916—Continued

Classification	1916 July		1916 August		1916 September		1916 October		1916 November		Total	
	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount
Mercantile Rating Agencies	4	75.00	....	.....	.....	.....	3	62.50	1	12.50	16	300.00
Messenger Companies	.....	.....	.....	.....	1	100.00	2	200.00	....	.....	5	500.00
Milk and Cream, Cans or Carts	15	7.50	12	6.00	5	2.50	8	4.00	19	9.50	238	119.00
Milk and Cream, Creameries	.....	.....	1	5.00	.....	.....	.....	.....	.....	.....	21	105.00
Milk and Cream, Dairy Wagons	2	5.00	2	5.00	7	17.50	1	2.50	2	5.00	283	707.50
Milk and Cream, Stores, etc	12	12.00	3	3.00	2	2.00	3	3.00	3	3.00	1219	1,219.00
Baseball Parks	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	100.00
Motor Buses	160	972.00	49	203.32	152	755.70	191	1,156.00	15	60.00	2064	7,452.47
Oil Storage	6	69.00	....	.....	.....	.....	6	69.00	1	20.00	29	368.00
Oil Tank Vehicles	20	200.00	1	10.00	.....	.....	29	290.00	2	20.00	133	1,290.00
Pawnbrokers	5	375.00	1	75.00	2	150.00	....	.....	1	75.00	17	1,275.00
Peddlers, Class 1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Peddlers, Class 2	149	2,235.00	3	45.00	....	.....	137	2,055.00	....	.....	570	8,390.00
Peddlers, Class 3	1	7.50	1	5.00	....	.....	3	22.50	....	.....	16	87.50
Peddlers, Class 4	....	.....	1	5.00	....	.....	1	5.00	....	.....	5	25.00
Peddlers, Class 5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	12.00
Peddlers, Class 6	38	190.00	3	13.35	2	3.30	33	165.00	2	10.00	171	828.30
Pool and Billiard Tables	96	2,030.00	11	195.85	3	23.35	8	42.50	7	24.93	417	7,324.18
Runners	61	305.00	13	43.55	18	79.95	34	170.00	4	13.40	289	1,331.90
Safe Deposit Vaults	2	20.00	.....	.....	.....	.....	1	10.00	.....	.....	7	70.00
Scavengers	114	342.00	1	3.00	21	63.00	103	309.00	1	3.00	511	1,531.00
Second Hand	147	735.00	18	90.00	6	35.00	155	775.00	10	50.00	684	3,425.00
Shooting Galleries	1	25.00	....	.....	1	8.35	1	25.00	....	.....	8	143.35
Shows and Exhibitions	....	.....	.....	.....	3	750.00	....	.....	1	10.00	6	1,050.00
Skating Rinks, Ice	.....	.....	.....	.....	.....	.....	.....	.....	1	16.65	2	41.65
Skating Rinks, Roller	.....	.....	.....	.....	1	8.35	1	25.00	....	.....	3	58.35
Storage	26	113.44	11	50.50	....	.....	14	56.50	17	79.00	135	635.02
Street Railway Cars	73	2,075.00	.....	.....	.....	.....	74	1,975.00	....	.....	291	7,800.00
Street Railway Cars, Freight on	.....	.....	1	5.00	1	124.75	.....	.....	1	8.00	5	197.75
Telegraph Systems	.....	.....	.....	.....	1	75.00	1	75.00	.....	.....	7	743.40
Telephone Systems	2	100.00	....	.....	.....	.....	1	50.00	....	.....	7	350.00
Theatres	39	714.19	5	114.40	6	118.45	49	918.22	2	37.61	226	4,205.84
Transient Merchants	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	250.00
Wharfingers	18	460.00	3	30.00	1	70.00	20	510.00	1	20.00	92	2,293.35
Wood Saws	5	25.00	11	55.00	3	15.00	2	10.00	1	5.00	86	430.00
	1825	18,204.22	616	3,464.68	2149	8,376.95	2217	16,662.76	714	2,594.43	16688	102,227.99

THE BONDED INDEBTEDNESS OF THE CITY OF PORTLAND, OREGON, NOVEMBER 30, 1916, AND THE INTEREST PAID THEREON

When Issued	Year Due	Years to Run	Rate of Int. %	PURPOSE OF ISSUE	Amount of Bonds	Interest Due	Interest Paid	Interest Out Nov. 30, 1916
				CITY HALL				
Jan. 1, 1890	1920	30	5	Purchase of Site	$ 175,000	$ 8,900	$ 8,887.50	$ 12.50
July 1, 1892	1922	30	5	Construction of Building	500,000	25,225	24,450.00	775.00
July 9, 1906	1916	10	6	Construction of Building St. Johns	10,000	600	600.00	
					$ 685,000	$ 34,725	$ 33,937.50	$ 787.50
				BRIDGES				
Jan. 1, 1892	1922	30	5	Purchase and Construction of Free Bridges	$ 500,000	$ 25,250	35,175.00	75.00
Apr. 1, 1895	1925	30	5	Purchase of Morrison St. Bridge	200,000	10,000		
Jan. 1, 1904	1934	30	4	Construction of Morrison St. Bridge	400,000	16,000		
Jan. 1, 1909	1939	30	4	Construction Hawthorne Ave. Pridge	450,000	18,000		
July 1, 1910	1940	30	4	Construction Broadway Bridge	250,000	10,000		
Jan 2, 1911	1941	30	4	Construction Broadway Bridge	500,000	20,000	$ 102,420.00	740.00
Sep. 1, 1911	1941	30	4	Construction Broadway Bridge	600,000	24,000		
Oct. 1, 1912	1942	30	4	Construction Broadway Bridge	315,000	13,080		
June 1, 1913	1943	30	4	Construction Broadway Bridge	52,000	2,080		
					$ 3,267,000	$ 138,410	$ 137,595.00	$ 815.00
				FERRY				
Apr. 1, 1893	1923	30	5	Construction of Free Ferry	$ 50,000	$ 2,500	$ 2,500.00	
Dec. 1, 1903	1933	30	5	Construction of Sellwood Ferry	15,000	750	750.00	
Jan. 1, 1904	1934	30	4	Construction of Albina Ferry	50,000	2,030	2,000.00	30.00
Mar. 21, 1911	1921	10	6	Purchase of Property, St. Johns	6,000	360	285.00	75.00
					$ 121,000	$ 5,640	$ 5,535.00	$ 105.00
				GENERAL				
Dec. 1, 1898	1928	30	5	Funding Floating Debt	$ 430,000	$ 21,500	$ 21,500.00	
May 1, 1903	1928	25	4	Redeem Outstanding Bonds	56,500	2,260	2,230.00	30.00
July 1, 1911	1936	25	4	Construction of Fire Boat	125,000	5,000	5,000.00	
Nov. 1, 1911	1941	30	4	Construction of Jail Building	200,000	8,560	8,000.00	560.00
Dec. 1, 1913	1943	30	4	Construction of Auditorium	35,000	1,400	12,700.00	
Mar. 1, 1916	1946	30	4	Construction of Auditorium	565,000	11,300		
					$ 1,411,500	$ 50,020	49,430.00	$ 590.00

THE BONDED INDEBTEDNESS OF THE CITY OF PORTLAND, OREGON, NOVEMBER 30, 1916, AND THE INTEREST PAID THEREON—Continued

When Issued	Year Due	Years to Run	Rate of Int. %	PURPOSE OF ISSUE	Amount of Bonds	Interest Due	Interest Paid	InterestOut Nov.30, 1916
				PARKS AND BOULEVARD				
Dec. 1, 1908...	1933	25	4	Purchase and Improvement of Parks and Boulevards.	$ 500,000	$ 20,000		
July 1, 1911...	1936	25	4	Purchase and Improvement of Parks and Boulevards.	250,000	10,000	$ 39,980	$ 40.00
Oct. 1, 1912...	1937	25	4	Purchase and Improvement of Parks and Boulevards.	250,000	10,020		
					$ 1,000,000	$ 40,020	$ 39,980	$ 40.00
				EAST PORTLAND AND ALBINA BONDS				
May 1, 1891...	1921	30	6	Construction of Light Plant, East Portland.....	$ 50,000	$ 3,300	$ 1,800	$ 1,500.00
Jun. 1, 1891...	1921	30	6	Municipal Expenses, Albina.....	40,000	2,400	2,400	
Jun. 1, 1891...	1921	30	6	Construction of Boulevards and Roadways, Albina...	50,000	3,000	3,000	
Jun. 1, 1891...	1921	30	6	Purchase and Improvement of Parks, Albina.....	50,000	3,000	3,000	
					$ 190,000	11,700	$ 10,200	$ 1,500.00
				GARBAGE CREMATORY				
Sep. 1, 1910...	10% An.	10	5	Construction of Crematory.....	$ 25,000	$ 1,250	$ 3,135	
Dec. 1, 1911...	10% An.	10	5	Construction of Crematory.....	40,600	1,885		
					$ 65,600	3,135	$ 3,135	
				PUBLIC DOCKS*				
Nov. 1, 1911...	1961	50	4½	Purchase and Construction of Public Docks.....	$ 50,000			
May 1, 1913...	1943	30	4½	Purchase of Property and Construction of Docks.....	1,250,000			
Sep. 1, 1913...	1923	10	5	Purchase of Property and Construction of Docks.....	200			
Dec. 1, 1913...	1943	30	4½	Purchase of Property and Construction of Docks.....	900,000			
Oct. 1, 1914...	1939	25	4½	Purchase of Property and Construction of Docks.....	100,000			
May 1, 1915...	1945	30	4½	Purchase of Property and Construction of Docks.....	100,000			
Apr. 21, 1908..	1928	20	6	Construction of Dock, St. Johns.....	60,000			
					$ 2,460,200			

*Accounts kept by the Commission of Public Docks not in City's general books.

THE BONDED INDEBTEDNESS OF THE CITY OF PORTLAND, OREGON, NOVEMBER 30, 1916, AND THE INTEREST PAID THEREON—Continued

When Issued	Year Due	Years to Run	Rate of Int. %	PURPOSE OF ISSUE	Amount of Bonds	Interest Due	Interest Paid	InterestOut Nov.30, 1916
				WATER				
May 1, 1891...	1921	30	6	Construction of Water System, East Portland.....	$ 250,000	$ 15,360	$ 9,300.00	$ 6,060.00
Jan. 1, 1887...	1917	30	5	Purchase of Water Works.....	700,000	35,000	144,825.00	325.00
July 1, 1893...	1923	30	5	Construction of Bull Run System.....	2,200,000	110,150		
Jan. 1, 1909...	1934	25	4	Const'n. of new Pipe Line and Purchase of Property..	250,000	10,000		
Jun. 1, 1910...	1935	25	4	Const'n of new Pipe Line and Purchase of Property...	500,000	20,000	49,980.00	20.00
Sep. 1, 1910...	1935	25	4	Const'n. of new Pipe Line and Purchase of Property..	500,000	20,000		
Jan. 1, 1911...	1936	25	4	Const'n. of new Pipe Line and Purchase of Property..	500,000	20,000		
Mar. 1, 1911...	1936	25	4	Const'n. of new Pipe Line and Purchase of Property..	500,000	20,000		
Oct. 1, 1911...	1936	25	4	Const'n. of new Pipe Line and Purchase of Property..	500,000	20,000		
Mar. 1, 1912...	1937	25	4	Const'n. of new Pipe Line and Purchase of Property..	500,000	20,000		
Nov. 1, 1912...	1937	25	4	Const'n. of new Pipe Line and Purchase of Property.	250,000	10,000		
Jun. 1, 1913...	1938	25	4	Const'n. of new Water Mains and Pur. of Property...	242,000	9,680		
Aug. 1, 1913...	1938	25	4	Const'n. of new Water Mains and Pur. of Property..	75,000	3,000	156,880.00	3,140.00
Sep. 1, 1913...	1938	25	4	Const'n. of new Water Mains and Pur. of Property...	250,000	10,000		
Nov. 1, 1913...	1538	25	4	Const'n. of new Water Mains and Pur. of Property....	22,000	880		
Dec. 1, 1913...	1938	25	4	Const'n. of new Water Mains and Pur. of Property...	285,000	11,400		
Feb. 2, 1914...	1939	25	4	Const'n. of new Water Mains and Pur. of Property...	175,000	7,000		
Dec. 1, 1914...	1939	25	4	Const'n. of new Water Mains and Pur. of Property...	135,000	5,400		
Mar. 1, 1915...	1940	25	4	Const'n. of new Water Mains and Pur. of Property...	460,000	20,160		
Apr. 1, 1916...	1941	25	4	Const'n. of new Water Mains and Pur. of Property..	125,000	2,500		
Apr. 1, 1913...	1933	20	5½	Construction of Water System, Linnton.....	100,000	6,160	6,517.50	2,392.50
May. 1, 1915..	1920	*	5½	Construction of Water System, Linnton.....	50,000	2,750		
					$ 8,569,000	379,440	367,502.50	11,937.50
				Grand Total.....	17,769,300	663,090	647,315.00	15,775.00
				Less Crematory Bonds redeemed..... .....$10,800				
				Less St. Johns City Hall Bonds redeemed..... 10,000	20,800			
				Net Total November 30, 1916.....	17.748,500			

*$2,000 each year for 5 years, May 1, 1925; $3,000 each year for 5 years, May 1, 1930; $5,000 each year for 5 years.

** Improvement Bonds outstanding Nov. 30, 1916, issued on account of street improvement, sewer, street extension and water main assessments, and not a part of the limitations by law as to indebtedness, $12,861,349.88.

BONDS HELD AS SINKING FUND INVESTMENTS IN CUSTODY OF THE CITY TREASURER NOVEMBER, 30, 1916

Water Bond Sinking Fund Investments	$ 764,000.00
Sinking Fund Investments	785,787.27
Bonded Indebtedness Sinking Fund Investments	3,000.00
Public Dock Sinking Fund—Investments	178,373.98
Total	$1,731,161.25

BONDED INDEBTEDNESS

General Bonds Outstanding	$10,429,500.00
Water Bonds Outstanding	7,319,000.00
Improvements Bonds Outstanding	12,840,511.65
Street Extension Bonds Outstanding	20,838.23
Total	$30,609,849.88

COMPARATIVE TAX LEVY

	1916 (Mills)	1917 (Mills)
General Fund	6.487	7.300
Bonded Indebtedness Interest Fund	1.096	1.200
Sinking Fund	.400	.400
Special Bridge Fund	.217	.....
Firemen's Relief and Pension Fund	.100	.100
Public Docks	.600	.600
Total Tax Levy for City purposes	8.900	9.600
Total Levy for County and State	25.400	27.400

ASSESSED VALUATION FOR CITY

	1916	1917
Real Estate and Improvements	$237,951,255.00	$224,878,145.00
Personal	33,660,700.00	31,372,920.00
Public Service	31,390,575.00	28,877,690.00
	$303,002,530.00	$285,128,755.00
Assessed valuation for County including City	$323,600,680.00	$305,244,595.00

INVENTORY OF CITY PROPERTY—PERSONAL PROPERTY

Auditor's Office	$ 5,290.80
Street improvement and Sewer warrants surrendered to the City for General Fund warrants, by authority of the Council, face value	78,376.03
Street improvement and Sewer warrants drawn in favor of the City, to cover expense of engineering and advertising, value	18,800.67
Election Booths, one-half interest in	5,000.00
Civil Service Board	817.43
Mayor's Office	927.85
Bureau of Fire	667,217.10
Bureau of Police	16,791.19
Bureau of Health	5,488.72
Municipal Court	396.08
Board of Motion Picture Censors	41.79
Commissioner of Public Affairs	422.71
Office of City Attorney	5,182.26
Bureau of City Hall	3,028.67
Free Museum	50,000.00
Bureau of Weights and Measures	1,215.60
Municipal Reference Library	684.00
Bureau of Parks	36,842.50
Bureau of Public Employment	1,159.55
Commissioner of Finance	342.47
Office of City Treasurer	4,261.35
Bureau of Licenses	47.00
Bureau of Purchases	845.23
Municipal Garage	1,336.50
Public Market	240.00
Municipal Shop	4,451.58
Commissioner of Public Utilities	484.10
Bureau of Street Cleaning	73,410.38
Bureau of Garbage Disposal	4,250.03
Department of Public Works	47,694.34
Bureau of Water Works	263,509.14
Department of Public Docks	21,809.22
Bureau of Harbor Patrol	5,002.24
	$1,325,366.53

OFFICE OF CITY AUDITOR—INVENTORY OF CITY PROPERTY—REAL PROPERTY

Name	Location	Area in Acres	Value of Land	Value of Improvements
	BUREAU OF CITY HALL			
City Hall Block	Between Fourth, Fifth, Madison and Jefferson Sts.	0.918	$ 300,000	$ 300,000
	BUREAU OF PARKS			
Park Blocks	A to F, inclusive, between Eighth St. and Park St. N. of Ankeny St., 7 to 20, inclusive, between Park St. and W. Park St. S. of Salmon St.	7.5	1,594,000	700
Lownsdale Square	Between Salmon, Main, Third and Fourth Sts.	.9	350,000	250
Chapman Square	Between Main, Madison, Third and Fourth Sts.	.9	300,000	250
Washington Park	Between Washington and Jefferson Sts	40.78	370,000	7,750
Terwilliger Park	Lowell and Macadam Sts	4.4	26,000	
Forestry Building	Twenty-eighth and Upshur Sts.	2.0	20,000	10,000
Ladd Parks	Five parcels in Ladd's Addition	1.5	9,450	
Holladay Park	Between Holladay Ave., Multnomah, Eleventh and Thirteenth Sts.	5.0	128,000	700
Macleay Park	South of Willamette Heights Addition	130.2	65,000	
Columbia Park	Lombard and Woolsey Sts.	30.	61,000	4,100
Governor's Park	Davenport St., Portland Heights	4.0	29,400	
Lincoln Park	Between Beech and Failing Sts., Mallory and Garfield Aves.	2.0	23,000	500
Sellwood Playground	Clatsop Ave. and E. Twenty-third St.	.88	1,050	
Fulton Park	Southern Portland	30.0	12,000	
Peninsula Park	Portland Blvd., Ainsworth Ave., Albina Ave. and Kerby St.	17.4	50,000	50,400
Sellwood Park	Sellwood	15.63	55,000	8,000
Kenilworth Park	E. Thirty-second St., E. Thirty-fourth St., Holgate St. to Cora Ave.	9.0	18,000	3,000
Laurelhurst Park	E. Oak, E. Ankeny, E. Thirty-third and E. Thirty-ninth Sts.	30.3	110,000	
Patton Square	Patton Ave., Maryland Ave. and Emerson St.	1.33	8,000	
Mt. Tabor Park	Mt. Tabor	176.0	422,000	3,600
Hillside Parkway	In. Secs. 10 and 16, T. 1 S., R. 1 E., W. M.	78.028	109,258	800
Gammans Square	Buffalo St., between Burrage and Wilbur Sts.	1.06	4,200	
Brooklyn Playground	N. E. cor. of Powell and Milwaukie Sts	2.00	13,000	1,700
Overlook Triangle	Block 20, Overlook	.04	600	
Lents Park	In Sec. 16, T. 1 S., R. 2 E., W. M	5.19	5,000	
E. Twenty-first Street Bridge	Block 39, Sullivan's Addition	.5	3,000	
	4 lots in Block 14, Proebstel's Addition	.43	2,500	
Columbia Highway—				
Crown Point		.143	2,500	
Sheppard's Dell		10.03	1,000	
Benson Park		740.	74,000	
	PUBLIC AUDITORIUM			
Market Block	Between Second, Third, Clay and Market Sts	.918	130,000	150,000

OFFICE OF CITY AUDITOR—INVENTORY OF CITY PROPERTY—REAL PROPERTY—Continued

Name	Location	Area in Acres	Value of Land	Value of Improvements
	BUREAU OF FIRE			
Fireboat 1	Foot of E. Washington St	.....	12,000	12,000
Fireboat 2	Foot of E. Hoyt St	.....	.....	400
Engine 1	Lot 6, Blk. 50, Portland	.11	87,000	8,000
Engine 2	N. E. corner of Third and Glisan Sts.	.108	15,000	14,000
Engine 3	E. ½ Lot 8, Blk. 315, Portland.	.11	26,000	2,800
Engine 4	Lot 6, Blk. 143, Portland	.11	6,150	15,000
Engine 5	Lot 3, Blk. 128, Carruthers Addition.	.11	1,600	2,500
Engine 6	Twenty-second and Nicolai Sts	.....	.....	1,500
Engine 7	N. ½ Lots 13, 14, 15, 16, Frush's Square	.11	6,000	8,000
Engine 8	Lot 20, Blk. 26, Albina	.167	4,400	15,000
Engine 9	Lot 6, Blk. 20, Sunnyside	.076	2,600	15,000
Engine 10	Macadam Road	.11	600	3,000
Engine 11	N. W. cor. of E. Twelfth and Powell Sts	.11	700	3,000
Engine 12	Lot 4, Blk. 5, Wynkoop Villa	.168	1,400	3,000
Engine 13	Lot 5, Blk. 71, Holladay Add	.11	3,500	7,200
Engine 14	Lot 6, Blk. 5. Maegley Highland	.11	1,700	1,000
Engine 15	Lot 5, Blk. 104, Grover's Addition	.11	2,200	7,000
Engine 16	Lots 7 and 10, Blk. 1, Sub. Z, Portland	.22	8,500	15,000
Engine 17	Lot 16. Blk. 3, King's 2nd Addition	.11	5,200	12,000
Engine 18	Lots 14 and 15, Blk. 1, E. Irvington	.22	3,000	7,000
Engine 19	S. 100 ft. of E. 100 ft. Lot 1, Blk. 2, Ramona	.22	1,700	9,000
Engine 20	Lots 12 and 13, Blk. 57, Sellwood	.22	3,100	1,000
Engine 21	N. ½ Lot 3, Blk. 30, Portland	.057	13,100	16,000
Engine 22	N. ½ Lot 4, Block 9, Portland	.057	10,500	15,000
Engine 23	S. ½ Lot 7, Blk. 76, Stephens' Add	.057	950	7,000
Engine 24	N. W. 100 ft. by 100 ft. of S. ½ Blk. B, Patton Tract	.22	7,000	15,000
Engine 25	Lots 1 and 2, Blk. 10, Kenilworth	.22	1,200	16,000
Engine 26	Lot 2, Blk. 291, Couch's Addition	.11	4,200	2,400
Engine 27	Lots 1 and 2, Blk. 11, Terrace Park	.22	1650	8,400
Engine 28	Lots 1 and 2, Blk. 77, Rose City Park	.21	1,600	8,000
Engine 29	426 Durham Ave	.....	.....	8,000
Engine 30	Lots 33, 34 and 35, Blk. 38, Kenton	.17	900	8,000
Engine 31	Lots 8 and 9, Blk. 11, Kern Park	.22	800	2,880
Engine 32	Blk. B, James John Add., St. Johns	.298	8,000	20,000
Engine 33	Lot 13, Blk. 14, Multnomah	.11	2,400	800
Truck 3	E. ½ Lots 2 and 3, Blk. 99, Couch's Addition	.11	10,500	12,500
Supply House	N. ½ Lot 6, Blk. 47, Holladay's Add	.057	2,500	1,800
Unimproved	Lot 14, Blk. 29, Albina Homestead	.139	1,100	.....
Unimproved	Lot 11, Blk. 10, Proebstel's Addition	.101	1,000	.....
Unimproved	Lots 7 and 8, Blk. 2, Richmond	.22	2,100	.....
Unimproved	Lots 28 and E. ½ 13, Blk. 5, Scenic Place	.17	2,000	.....
Unimproved	W. ½ Lots 10, 11, Sherlock's Add	.11	4,200	.....
Unimproved	Lots 12, 13 and S. ½ 14, Blk. 29, Sunnyside	.18	2,500	.....
Unimproved	Lots 1, 2, 3, 4, Blk. 15, Willamette	.22	1,000	.....
Unimproved	½ Lot 1, Blk. 30, Woodstock	.11	600	.....
	BUREAU OF HEALTH			
Smallpox Hospital	8 rooms and bath	.....	Owned by County	
Former site hospital for contagious diseases—unimproved	Tract "D," Sec. 5, T. 1 S., R. 1 E., W. M.	2.0	2,625	2,568
Infantile Paralysis Hospital	3 rooms	.....	Owned by County	611

OFFICE OF CITY AUDITOR—INVENTORY OF CITY PROPERTY—REAL PROPERTY—Continued

Name	Location	Area in Acres	Value of Land	Value of Improvements
	BUREAU OF POLICE			
Police Station	Lots 3 and 4, Blk. 30, Portland	.22	$ 190,000	$ 285,000
Old Albina police station and jail site	N. E. 25 ft. Lots 3 and 4, Blk. 56, Albina	.11	2,100	
Unimproved	S. 50 ft. Lot 1, Blk. 1, Albina	.11	7,000	
St. John's Police Station	Blk. 1, Jas. John Addn	.68	1,500	11,000
Linnton Police Station	Lots 5 and 6, Blk. 46, Linnton	.22	500	2,000
	FERRY APPROACHES			
New Albina Ferry	West Side, N. 60 ft. of Lot 21, Blk. 2, Doscher's Add. and S. 5 ft. of Lot 22, Blk. 2, Doscher's Addition	.30	37,525	
	East Side, Southerly 65 ft. of Lot 9, Albina River Lots	.45	19,500	
	BUREAU OF STREET CLEANING			
West Side Barn	Lots 5, 8, 9, 10, 11 and 12, Blk. 1, Davenport Tract	.64	52,000	48,600
Hancock Street Barn	Lots 1, 2, 7 and 8, Blk. 251, Holladay's Add	.45	11,425	8,000
Brooklyn Barn	Powell and Milwaukie Sts	.50	5,000	40,000
	BUREAU OF WATER WORKS			
Bull Run Pipe Line and Service Mains				11,000,000.00
Old reservoir site	All of Blk. 32, Caruthers' Add., Broadway and Lincoln Sts	.92	100,000	1,000
Portland Heights reservoir site	Blk. "K," Greenway Add	.51	5,000	11,114
Repair and meter shop	S. E. ¼ of Blk. 150, Portland, Fourth and Market Sts	.25	125,000	1,000
East Side Water Office	Lot 8, Blk. 139, East Portland, E. 7th and E. Alder Sts	.11	8,500	23,415
Site of old Irvington standpipe	Lots 5 and 6, Blk. 257, Holladay Add., E. 13th and Schuyler Sts	.22	4,500	
Former pumping station	Tract foot of Sherman St	.50	12,000	
Bull Run conduits No. 1 and 2	Tract foot of Stephens St	.60	7,500	
Reservoirs No. 3 and 4	Adjoining Washington Park	63.10	189,000	569,000
Water tanks	Portland Heights	.04	600	
Water tanks	Willamette Heights	.06	500	2,500
Albina warehouse	Blk. 73, Albina, Randolph and Loring Str	1.00	40,000	5,000
Albina Water Office, shop and stable	Part of Blk. 25 and 26, Albina, Russell St., between Williams Ave. and Rodney Ave	.29	7,000	32,310
Old Highland tank site	Lot 4, Blk. 6, Maegley Highland, Union Ave., between Wygant and Going Sts	.10	2,500	
Old tank site, Brown's system	E. Sixtieth St. and Foster Road	.08	700	
Old tank site, Brown's system	Lot 1, Blk. 1, Pomona Add	.08	300	
Old tank site, Brown's system	Lot in School Park Add	.01	50	

OFFICE OF CITY AUDITOR—INVENTORY OF CITY PROPERTY—REAL PROPERTY—Continued

Name	Location	Area in Acres	Value of Land	Value of Improvements
Old tank site, Brown's system	Lot 5, Blk. 22, Saginaw Heights	.10	$ 300	$ 30.00
Vernon standpipe	Tract E. Twentieth and Prescott Sts.	2.34	11,000	12,000.00
Palatine pump station		21.00	60,000	10,000.00
High service reservoir No. 1	Mt. Tabor	5.75	28,000	134,000.00
Low service reservoir No. 2	Mt. Tabor	10.00	50,000	121,000.00
Reservoirs No. 5 and 6	Mt. Tabor	45.17	150,000	690,000.00
Standpipe	Near Lusted's	.50	100	
Headworks	Clackamas and Multnomah Counties	4360.00	150,400	16,597.93
Standpipe	Council Crest	.25	900	2,200.00
Pump station	Old Kinzel Park pump station, East 76th and Yamhill Sts.	1.00	2,000	200.00
Tract for water tanks	Extension 19th St. 100 ft. S. of Spring St.	.025	500	
Linnton Reservoir No. 2	S. 60 ft. Lots 32 and 33, Blk. 20, First Addition to Linnton	.07	150	2,890.00
Linnton Reservoir No. 3	Lower Whitwood, Linnton	.23	500	2,890.00
Linnton Reservoir No. 4	Upper Whitwood, Linnton	.23	500	3,102.00
Linnton Reservoir No. 6	Frac. Lot 8, Blk. 28, Willalatin Park	.23	500	2,890.00
Linnton Reservoir No. 7	Lower Willbridge, Linnton	.22	475	3,102.00
Linnton Reservoir No. 8	Upper Willbridge, Linnton	.13	280	1,440.00
Whitwood Court pump	Lot 1, Blk. 24, Whitwood Court	.60	1,475	212.00
St. Johns Pump Plant	Lots 1, 2, 7 and 8, Blk. 14, Jas. John Add. to St. Johns	.44	2,500	2,250.00
St. Johns Tanks	Lots 1, 2, 7 and 8, Blk. 2, Adams Add. to St. Johns	.44	2,500	5,861.00
King's Heights reservoir	Lots 1 and 2, Blk. 21, King's Heights	Easemt		7,671.00
Burlingame standpipe	Lots 3 and 4, Burlingame	"		16,057.00
Tabor Heights tank	North slope, Mt. Tabor	Bu. of P	arks	7,105.00
South Portland tank	Bancroft and West Sts.	In stree	t	2,500.00
Linnton Reservoir No. 1	Third and F Sts.	In stree	t	3,102.00
BUREAU OF GARBAGE DISPOSAL				
Crematory	North of St. Helens Road in Poole Tract	4.98	55,000	100,000.00
BUREAU OF HIGHWAYS AND BRIDGES				
Morrison St. Bridge				258,300.00
Burnside St. Bridge				117,000.00
Hawthorne Ave. Bridge				418,500.00
Broadway Bridge				1,381,230.00
Front St. Bridge				49,797.00
First St. Bridge				35,928.00
Thurman St. Bridge				15,093.00
Grand Ave. Bridge				45,256.50
Union Ave. Bridge				46,939.50
E. Twelfth St. Bridge				49,433.50
East Twenty-first St. Bridge				55,269.00
East Twenty-eighth St. Bridge				53,122.50
Various wood trestle bridges				9,000.00
Albina Ferry Boat				9,000.00
Albina Ferry Boat (new)				15,750.00
Sellwood Ferry Boat				8,550.00

OFFICE OF CITY AUDITOR—INVENTORY OF CITY PROPERTY—REAL PROPERTY—Continued

Name	Location	Area in Acres	Value of Land	Value of Improvements
	DEPARTMENT OF PUBLIC DOCKS			
Dock No. 1	Nwly. 75 ft. of Lot 14, and all of Lots 15, 16, 17, 18, 19 and 20, River Blocks, Watson's Addition. Lots 21, 22, 23, 24, 25, River Block 2, Doscher's Addition	11.85	$ 970,868.97	$ 641,615.49
Dock No. 2	Blks. 1 and 2, E. Portland	3.64	355,531.27	283,680.83
Dock No. 3	River lots 3, 4, 5, 6, James John's Add. to St. Johns	2.64	40,000.00	19,747.99
Public Levee	Public Levee	4.80	90,000.00	10,000.00
Boat landing, comfort station and office bldg	Municipal boat landing	60x100	40,000.00	43,879.99
		.....	1496,400.24	998,924.30

SUMMARY OF REAL AND PERSONAL PROPERTY OWNED BY THE CITY OF PORTLAND, OREGON, NOVEMBER 30, 1916

RESOURCES	Personal	Real Estate and Impts.
Auditor's Office	$ 107,467.50	$.....
Civil Service Board	817.43	.....
Mayor's Office	927.85	.....
Bureau of Fire	667,217.10	576,330.00
Bureau of Police	16,791.19	499,100.00
Bureau of Health	5,488.72	5,804.00
Municipal Court	396.08	.....
Board of Motion Picture Censors	41.79	.....
Commissioner of Public Affairs	422.71	.....
Office of City Attorney	5,182.26	.....
Bureau of City Hall	3,028.67	600,000.00
Free Museum	50,000.00	.....
Public Auditorium	.....	280,000.00
Bureau of Weights and Measures	1,215.60	.....
Municipal Reference Library	684.00	.....
Bureau of Parks	36,842.50	3,968,708.00
Bureau of Public Employment	1,159.55	.....
Commissioner of Finance	342.47	.....
Office of City Treasurer	4,261.35	.....
Bureau of Licenses	47.00	.....
Bureau of Purchases	845.23	.....
Municipal Garage	1,336.50	.....
Public Market	240.00	7,000.00
Municipal Shop	4,451.58	.....
Commissioner of Public Utilities	484.10	.....
Bureau of Street Cleaning	73,410.38	165,031.00
Bureau of Garbage Disposal	4,250.03	155,000.00
Bridges and Ferries	.....	2,568,168.00
Department of Public Works	47,694.34	.....
Bureau of Water Works	263,509.14	13,657,668.93
Ferry Approaches	.....	57,025.00
Department of Public Docks	21,809.22	2,495,324.54
Bureau of Harbor Patrol	5,002.24	.....
Cash balances in all funds, except Trust funds and Special Assessments funds	1,507,155.44	.....
Sinking Fund Investments:		
Water Bond Sinking Fund	764,000.00	.....
Sinking Fund	785,787.27	.....
Bonded Indebtedness Sinking Fund	3,000.00	.....
Public Docks Sinking Fund	178,373.98	.....
Certificate of Deposit	30,000.00	.....
	$ 4,593,683.22	$25,035,159.47
		4,593,683.22
Grand Total	$.....	$29,628,842.69
LIABILITIES		
Bonded Debt	$17,748,500.00	.....
Interest coupons due December 1, 1916	51,175.00	.....
Crematory Bonds due December 1, 1916	5,800.00	.....
Interest coupons outstanding November 30, 1916	15,775.00	.....
Claims payable account of 1916	40,975.75	.....
Warrants outstanding account of 1916	266,318.86	.....
Balance	11,500,298.08	$29,628,842.69

PORTLAND GAS & COKE COMPANY GENERAL BALANCE SHEET DECEMBER 31, 1915

Debit	CAPITAL ACCOUNT		Credit
Stocks and Bonds of other Companies owned by Respondent (give detail)	$ 126,401.00	Capital Stock	$ 5,000,000.00
		Funded Debt	6,239,000.00

Debit	ASSETS AND LIABILITIES		Credit
Cash	$ 10,528.12	Audited Vouchers and Accounts	$ 43,523.90
Bills Receivable	20,794.84	Wages and Salaries	12,199.81
Accounts Receivable	280,202.35	Other Liabilities (give detail)	57,158.34
Equipment	8,495,933.94	Accrued Accounts	258,344.56
Material and Supplies	108,652.89	Consumers' Deposits	26,750.47
Other assets (give detail)	2,670,019.19	Reserve Accounts	325,445.09
Prepaid Accounts	247,124.96		
Undistributed plant items	111,943.73		

Debit	INCOME ACCOUNT		Credit
Operating Expenses	$ 560,940.48	Operating Revenues	$ 1,285,831.16
Taxes Accrued	113,829.09	Sundry Interest	7,912.74
Int. on Funded Debt	311,312.12		
Dividend Exp.	297,500.00		

Debit	PROFIT AND LOSS		Credit
Misc. Deductions from Surplus	$ 983.35	Balance	$ 100,000.00
Bal. Dec. 31, 1915	109,178.86	Bal. from Income Acc't.	10,162.21
	$ 110,162.21		$ 110,162.21

PORTLAND GAS & COKE COMPANY GENERAL BALANCE SHEET MARCH 31, 1916

Debit	CAPITAL ACCOUNT		Credit	
Stocks and Bonds of other Companies owned by Respondent (give detail)	$ 26,701.00		Capital Stock	$ 5,000,000.00
			Funded Debt	6,239,000.00
Debit	**ASSETS AND LIABILITIES**		**Credit**	
Cash	$ 50,693.87		Audited Vouchers and Accounts	$ 149,681.99
Bills Receivable	217.60		Wages and Salaries	12,126.46
Accounts Receivable	183,314.31		Other Liabilities (give detail)	571,158.34
Equipment	8,614,650.44		Accrued Accounts	96,875.55
Material and Supplies	108,640.78		Consumers' Deposits	27,020.23
Other assets (give detail)	2,681,737.88		Reserve Accounts	319,860.52
Prepaid Accounts	243,195.02			
Construction Work in progress	144,494.41			
Debit	**INCOME ACCOUNT**		**Credit**	
Operating Expenses	$ 163,849.41		Operating Revenue	$ 352,168.26
Taxes Accrued	28,880.23			
Int, on Funded Debt	80,391.77			
Sundry Interest	35,000.00			
Dividend Expense	812.50			
Debit	**PROFIT AND LOSS**		**Credit**	
Miscellaneous Deductions from Surplus	$ 490.99		Balance	$ 109,178.86
Bal. March 31, 1916	151,922.22		Bal. from Income Acc't.	43,234.35

PORTLAND GAS & COKE COMPANY GENERAL BALANCE SHEET JUNE 30, 1916

Debit	CAPITAL ACCOUNT		Credit	
Stocks and Bonds of other Companies owned by Respondent (give detail)	$	26,701.00	Capital Stock	$ 5,000,000.00
			Funded Debt	6,314,000.00
Debit	**ASSETS AND LIABILITIES**		**Credit**	
Cash	$	5,184.53	Audited Vouchers and Accounts	$ 85,348.55
Bills Receivable		295,21	Wages and Salaries	17,148.61
Accounts Receivable		264,365.67	Other Liabilities (give detail)	57,158.34
Plants and Property		8,621,117.37	Accrued Accounts	201,261.32
Material and Supplies		101,917.90	Consumers' Deposits	27,164.34
Other assets (give detail)		2,670,019.19	Reserve Accounts	320,226.70
Prepaid Accounts		250,658.46		
Construction Work in progress		202,122.52		
Debit	**INCOME ACCOUNT**		**Credit**	
Operating Expenses	$	298,037.96	Operating Revenue	$ 650,613.08
Taxes Accrued		56,844.00		
Int. on Funded Debt		161,252.38		
Dividend Expense		122,500.00		
Sundry Interest		442.90		
Debit	**PROFIT AND LOSS**		**Credit**	
Miscellaneous Deductions from Surplus	$	640.71	Balance	$ 109,178.86
Balance June 30, 1916		120,073.99	Bal. from Income Acc't.	11,535.84

PORTLAND GAS & COKE COMPANY GENERAL BALANCE SHEET SEPTEMBER 30, 1916

Debit	CAPITAL ACCOUNT		Credit	
Stocks and Bonds of other Companies owned by Respondent (give detail)	$	26,701.00	Capital Stock	$ 5,000,000.00
			Funded Debt	6,314,000.00

Debit	ASSETS AND LIABILITIES		Credit	
Cash	$	28,459.64	Audited Vouchers and Accounts	$ 97,318.62
Bills Receivable		636.80	Wages and Salaries	11,844.69
Accounts Receivable		183,139.41	Other Liabilities (give detail)	133,586.60
Plant and Franchises		8,622,252.01	Accrued Accounts	150,732.49
Materials and Supplies		122,243.78	Consumers' Deposits	27,811.88
Other assets (give detail)		2,670,019.19	Reserve Accounts	303,979.78
Prepaid Accounts		254,368.60		
Construction Work in progress		234,025.51		

Debit	INCOME ACCOUNT		Credit	
Operating Expenses	$	435,884.24	Operating Revenues	$ 968,396.38
Taxes Accrued		85,532.42		
Int. on Funded Debt		242,625.89		
Dividend Expense		210,000.00		
Sundry Interest		298.41		

Debit	PROFIT AND LOSS		Credit	
Bal. from Income Acc't.	$	5,944.58	Balance Jan. 1, 1916	$ 109,178.86
Miscellaneous Deductions from Surplus		662.40		
Balance Sept. 30, 1916		102,571.88		

PORTLAND RAILWAY LIGHT & POWER COMPANY GENERAL BALANCE SHEET DECEMBER 31, 1915

Debit	CAPITAL ACCOUNT	Credit
Stocks and Bonds of other Companies owned by Respondent (give detail) ..... $ 425,793.91		Capital Stock $20,000,000.00
Funded Debt Owned.... 700,000.00		Funded Debt 39,887,000.00

Debit	ASSETS AND LIABILITIES		Credit	
Cash	$	561,946.57	Audited Vouchers and Accounts	$ 120,082.97
Bills Receivable		230,354.41	Employees Funds	18,998.91
Accounts Receivable		740,473.30	Customers Deposits	17,456.00
Due from Agents.....		2,500.00	Tickets Outstanding	19,070.70
Road and Equipment...		59,350,464.07	Advance Collections	2,434.93
Material and Supplies...		525,953.63	Miscellaneous	61,963.78
Other Assets (give detail)		614,318.16	Paving Assessments	991,466.79
Prepaid Accounts		42,320.46	Interest Accrued	492,370.28
Cash in hands of Trustee		9,985.30	Taxes	280,084.62
			Maintenance and Depreciation Reserve	761,219.30
			Depreciation Road and Equipment	180,000.00

Debit	INCOME ACCOUNT		Credit	
Operating Expenses	$	627,302.35	Operating Revenue	$ 1,380,653.30
Taxes		125,230.97		
Miscellaneous Debits ...		3,858.50		
Interest on Bonds.....		487,183.19		
Interest on Floating Debt		14,982.98		
Bond Discount		29,652.31		
Rental on Bridges.....		12,277.65		

Debit	PROFIT AND LOSS		Credit	
Balance from Income of Amount Charged Off for Depreciation	$	91,300.64	Balance Sept. 30, 1915...	$ 355,377.09
			Balance from Income Account	80,165.35
			Adjustments	27,719.73
			Surplus	371,961.53

PORTLAND RAILWAY LIGHT & POWER COMPANY GENERAL BALANCE SHEET MARCH 31, 1916

Debit	CAPITAL ACCOUNT		Credit	
Stocks and Bonds of other Companies owned by Respondent (give detail)	$	426,240.60	Capital Stock	$20,000,000.00
Funded Debt Owned		700,000.00	Funded Debt	39,887,000.00

Debit	ASSETS AND LIABILITIES		Credit	
Cash	$	673,363.31	Audited Vouchers and Accounts	$ 135,428.41
Bills Receivable		235,700.12	Paving Assessments	974,023.77
Accounts Receivable		751,482.78	Employees Fund	18,571.27
Due from Agents		2,500.00	Customers Deposits	16,592.21
Equipment		59,383,019.26	Tickets Outstanding	20,063.92
Material and Supplies		516,112.98	Advance Collections	3,039.63
Other Assets (give detail)		583,498.10	Interest Accrued	556,369.82
Prepaid Accounts		17,384.46	Taxes Accrued	360,941.21
Cash in Hands of Trustee		14,860.30	Maintenance and Depreciation Reserve	746,801.20
			Depreciation Road and Equipment	210,000.00
			Miscellaneous	72,332.86

Debit	INCOME ACCOUNT		Credit	
Operating Expenses	$	629,448.21	Operating Revenue	$ 1,303,438.54
Taxes Accrued		123,896.98		
Bridge		11,406.85		
Interest on Funded Debt		486,830.00		
Interest on Floating Debt		14,480.82		
Bond Discount		29,612.88		
Miscellaneous Debits		2,661.07		

Debit	PROFIT AND LOSS		Credit	
Balance from Income of Amount Charged Off for Depreciation	$	57,370.73	Balance Dec. 31, 1915	$ 371,961.53
			Balance from Income Account	5,101.73
			Adjustments	16,694.92
			Surplus	302,997.61

PORTLAND RAILWAY LIGHT & POWER COMPANY GENERAL BALANCE SHEET JUNE 30, 1916

Debit	CAPITAL ACCOUNT	Credit
Stocks and Bonds of other Companies owned by Respondent (give detail) ..... $ 576,175.70		Capital Stock $20,000,000.00
Funded Debt Owned.... 5,000,000.00		Funded Debt 44,811,000.00

Debit	ASSETS AND LIABILITIES		Credit	
Cash	$	171,406.56	Audited Vouchers and Accounts	$ 146,758.35
Bills Receivable		246,190.99	Paving Assessments.....	943,942.25
Accounts Receivable		627,239.84	Unpaid Taxes	251,837.04
Due from Agents		4,000.00	Employees Funds	18,224.83
*Road		59,387,627.50	Consumers Deposits.....	16,068.80
Material and Supplies..		514,288.25	Tickets Outstandnig....	18,561.18
Other Assets (give detail)		552,067.88	Advance Collections.....	1,969.34
Prepaid Account		101,245.81	Interest Accrued	496,305.28
Sinking Fund Investment		713,000.00	Taxes Accrued	81,818.44
Cash in Hands of Trustees		186,375.14	Depreciation Reserve...	925,435.73
			Miscellaneous	69,783.13

*This item to be changed to conform to purpose for which franchise is granted.

Debit	INCOME ACCOUNT		Credit	
Operating Expenses.....	$	627,819.19	Operating Revenue.....	$ 1,356.451.11
Taxes		131,540.18		
Bond Discount		29,605.74		
Bridge Rentals		11,880.76		
Interest on Floating Debt		14,225.56		
Miscellaneous Debits....		2,617.07		
Interest on Funded Debt		486,164.33		

Debit	PROFIT AND LOSS		Credit	
Balance from Income of Amount Charged Off for Depreciation	$	80,657.62	Balance March 31, 1916..	$ 302,997.61
			Balance from Income Account	52,598.28
			Adjustment	22,975.03
			Surplus	297,913.30

PORTLAND RAILWAY LIGHT & POWER COMPANY GENERAL BALANCE SHEET SEPTEMBER 30, 1916

Debit	CAPITAL ACCOUNT	Credit	
Stocks and Bonds of other Companies owned by Respondent (give detail)	$ 576,489.63	Capital Stock	$20,000,000.00
Funded Debt Owned	5,000,000.00	Funded Debt	44,724,000.00

Debit	ASSETS AND LIABILITIES	Credit	
Cash	$ 244,203.24	Loans and Bills Payable	$ 7,500.00
Bills Receivable	250,133.82	Audited Vouchers and Accounts	133,327.80
Accounts Receivable	639,341.20	Employees Funds	17,869.79
Due from Agents	4,000.00	Consumers Deposits	16,018.82
Equipment	59,358,119.15	Tickets Outstanding	21,422.60
Material and Supplies	487,516.06	Advance Collections	2,081.82
Other Assets (give detail)	490,824.15	Paving Assessments	903,159.64
Prepaid Accounts	67,173.99	Unpaid Taxes	251,837.04
Sinking Fund Investment	946,400.00	Interest Accrued	554,929.70
Cash in Hands of Trustees	7,529.00	Taxes Accrued	181,158.24
		Depreciation Reserve	897,333.70
		Miscellaneous	84,195.31

Debit	INCOME ACCOUNT	Credit	
Operating Expenses	$ 613,584.33	Operating Revenue	$ 1,338,823.73
Taxes	130,578.44		
Rental on Bridges	11,854.59		
Interest on Bonds	482,406.74		
Interest on Floating Debt	14,175.34		
Bond Discount	29,699.69		
Miscellaneous Debits	4,156.00		

Debit	PROFIT AND LOSS	Credit	
Balance from Income of Amount Charged Off for Depreciation	$ 86,443.28	Balance June 30, 1916	$ 297,913.30
		Balance from Income Account	52,368.60
		Adjustments	13,057.16
		Surplus	276,895.78

PACIFIC TELEPHONE & TELEGRAPH COMPANY GENERAL BALANCE SHEET DECEMBER 31, 1915

Debit	CAPITAL ACCOUNT	Credit
Stocks and Bonds of other Companies owned by Respondent (give detail)	$ 4,370,794.44	Capital Stock	$50,000,000.00
Intangible Capital	14,154,872.79	Funded Debt	41,112,000.00
Miscellaneous Investments	333,864.26		

Debit	ASSETS AND LIABILITIES		Credit
Cash and Deposits	$ 941,257.04	Loans and Bills Payable	$ 3,600,000.00
Bills Receivable	2,374,686.07	Audited Vouchers and Accounts	269,937.52
Accounts Receivable; due from Agents	4,252,093.50	Wages and Salaries	370,351.69
Construction	72,413,093.18	Other Liabilities (give detail)	847,685.80
Equipment	674,897.91	Taxes	$334,193.86	
Material and Supplies	558,644.30	Interest	12,500.00	
Real Estate	6,013,935.91	Dividends Payable	480,000.00	
Franchise	4,680.20	Income Tax Collections	1,292.12	
Sinking Fund	218,895.21	Tax on Tax Exempt Bonds	2,862.50	
Prepayments	162,211.55	Federal Revenue Tax	7,174..03	
Unamortized Debt Discount and Expense	2,058,454.48	Employees' Stock Purchase Receipts	9,663.29	
		Insurance and Casualty Reserve		50,000.00
		Liability for Emp. Ben. Fund		500,000.00
		Reserve for Accrued Depreciation		10,962,402.42

Debit	INCOME ACCOUNT	Credit	
Operating Expenses	$13,445,043.40	Operating Revenue	$19,025,727.94
Uncollectible	221,619.40	Dividends on Stocks Owned	44,081.74
Taxes Accrued	925,355.13	Interest on Funded Debts Owned	172,055.17
Miscellaneous Rents	287,004.01	Interest on Securities, Loans and Accounts	174,671.68
Interest	2,339,104.16	Non-Operating Revenue	31,156.10
Amortization of Debt Discount and Expense	98,986.16		
Miscellaneous Deductions from Income	8,166.12		
Dividend Appropriations of Income	1,920,000.00		

Debit	PROFIT AND LOSS	Credit	
Other Deductions from Surplus	$ 15,444.45	Balance	$ 633,033.61
		Balance from Income Account	202,414.25

PACIFIC TELEPHONE & TELEGRAPH COMPANY GENERAL BALANCE SHEET MARCH 31, 1916

Debit	CAPITAL ACCOUNT	Credit
Stocks and Bonds of other Companies owned by Respondent (give detail)	$ 4,406,669.44	
Intangible Capital	14,154,872.79	
Miscellaneous Investments	333,864.26	
	Capital Stock	$50,000,000.00
	Funded Debt	40,862,000.00

Debit	ASSETS AND LIABILITIES	Credit
Cash and Deposits	$ 633,065.35	
Bills Receivable	2,349,155.59	
Accounts Receivable; due from Agents	4,714,373.78	
*Construction	72,727,299.93	
Equipment	703,827.47	
Material and Supplies	494,951.67	
Real Estate	5,937,583.96	
Franchise	5,089.20	
Sinking Fund	411.19	
Prepayments	165,841.58	
Unamortized Debt Discount and Expense	2,020,000.81	
	Loans and Bills Payable	$ 3,600,000.00
	Audited Vouchers and Accounts	455,046.28
	Wages and Salaries	383,387.23
	Other Liabilities (give detail)	1,030,526.76
	Taxes $ 3,748.24	
	Interest 521,906.67	
	Dividends Payable 480,000.00	
	Income Tax Collections 1,412.94	
	Tax on Tax Exempt Bonds 4,334.75	
	Federal Revenue Tax 7,181.60	
	Employees' Stock Purchase Receipts 9,076.86	
	Insurance 2,865.70	
	Insurance and Casualty Reserve	50,000.00
	Liability for Emp. Ben. Fund	497,025.33
	Reserve for Accrued Depreciation	10,923,459.16
	Other Deferred Credit Items	3,597.38

*This item to be changed to conform to purpose for which franchise is granted.

Debit	INCOME ACCOUNT	Credit
Operating Expenses	$ 3,346,258.87	
Uncollectible	54,855.36	
Taxes Accrued	235,610.25	
Miscellaneous Rents	59,929.11	
Interest	576,541.79	
Amortization of Debt Disc. and Expense	24,465.27	
Misc. Deductions from Income	4,069.25	
Dividend Appropriations of Income	480,000.00	
	Operating Revenue	$ 4,739,469.34
	Dividends on Stocks Owned	184.00
	Interest on Funded Debts Owned	47,666.97
	Interest on Securities, Loans and Accounts	31,149.27
	Non-Operating Revenue	8,913.50

Debit	PROFIT AND LOSS	Credit
Other Deductions from Surplus	$ 24,391.71	
	Balance	$ 820,003.41
	Balance from Income Account	45,653.18
	Misc. Additions to Surplus	700.00

PACIFIC TELEPHONE & TELEGRAPH COMPANY GENERAL BALANCE SHEET JUNE 30, 1916

Debit	CAPITAL ACCOUNT	Credit
Stocks and Bonds of other Companies owned by Respondent (give detail) ..... $ 5,957.552.41		Capital Stock $50,000,000.00
Intangible Capital 14,154,872.79		Funded Debt 40,845,000.00
Miscellaneous Investments 333,864.26		

Debit	ASSETS AND LIABILITIES	Credit
Cash and Deposits..... $ 738,260.51		Loans and Bills Payable. $ 3,900,000.00
Bills Receivable 1,957,188.03		Audited Vouchers and Accounts 505,307.16
Accounts Receivable; due from Agents..... 2,303,622.02		Wages and Salaries..... 372,382.34
*Construction 74,406,011.56		Other Liabilties (give detail) 743,259.74
Equipment 720,924.93		Taxes $223,722.14
Material and Supplies... 524,102.30		Interest 12,500.00
Real Estate 6,199,183.52		Dividends Payable 480,000.00
Franchise 5,309.20		Income Tax Collections . 232.34
Sinking Fund 411.19		Tax on Tax Exempt Bonds 1,513.75
Prepayments 215,896.61		Federal Revenue Tax 8,974.07
Unamortized Debt Disc. and Exp. 1,995,663.46		Employes' Stock Purchase Receipts 16,317.44
		Insurance and Casualty Reserves 50,000.00
		Liability for Emp. Ben. Fund 502,024.83
		Reserve for Accrued Depreciation 11,640,081.67
		Other Deferred Credit Items 14,943.80

*This item to be changed to conform to purpose for which franchise is granted.

Debit	INCOME ACCOUNT	Credit
Operating Expenses .... $ 6,951,010.38		Operating Revenue .....$ 9,750,228.09
Uncollectible 111,010.66		Dividends on Stocks Owned 14,463.00
Taxes Accrued 475,093.00		Interest on Funded Debts Owned 109,703.80
Miscellaneous Rents 114,626.47		Interest on Securities, Loans and Discounts.. 62,646.67
Interest 1,147,795.08		Non-Operating Revenue 18,154.45
Amortization of Debt, Discount and Expense 48,802.62		
Misc. Deductions from Income 4,156.25		
Dividend Appropriations of Income 960,000.00		

Debit	PROFIT AND LOSS	Credit
Other Deductions from Surplus .....$ 24,391.71		Balance .....$ 820,003.41
		Balance from Income Account 142,701.55
		Misc. Additions to Surplus 1,550.00

PACIFIC TELEPHONE & TELEGRAPH COMPANY GENERAL BALANCE SHEET SEPTEMBER 30, 1916

Debit	CAPITAL ACCOUNT	Credit
Stocks and Bonds of other Companies owned by Respondent (give tail)	$ 5,989,964.40	Capital Stock	$50,000,000.00
Intangible Capital	14,174,148.78	Funded Debt	40,813,000.00
Miscellaneous Investments	333,864.26		

Debit	ASSETS AND LIABILITIES		Credit
Cash and Deposits	$ 1,182,307.26	Loans and Bills Payable	$ 3,900,000.00
Bills Receivable	1,966,290.29	Audited Vouchers and Accounts	605,740.52
Accounts Receivable; due from Agents	2,446,966.90	Wages and Salaries	384,566.35
*Construction	74,893,220.45	Other Liabilities (give detail)	1,183,525.86
Equipment	769,729.53	Taxes	$158,038.48	
Material and Supplies	584,199.21	Interest	520,833.11	
Real Estate	6,195,001.41	Dividends Payable	480,000.00	
Franchise	5,409.20	Income Tax Collections	286.49	
Sinking Fund	365.39	Tax on Tax Exempt Bonds	3,135.25	
Prepayments	192,760.06	Federal Revenue Tax	6,479.47	
Unamortized Debt Disc. and Exp.	1,969,591.35	Employees' Stock Purchase Receipts	14,753.06	
		Insurance and Casualty Reserves	50,000.00
		Liability for Emp. Ben. Fund	497,395.43
		Reserve for Accrued Depreciation	12,190,056.34
		Other Deferred Credit Items	38,288.39

*This item to be changed to conform to purpose for which franchise is granted.

Debit	INCOME ACCOUNT	Credit
Operating Expenses	$10,739,736.17	Operating Revenue	$14,994,105.97
Uncollectible	155,893.02	Dividends on Stocks Owned	14,647.00
Taxes Accrued	735,659.95	Interest on Funded Debts Owned	179,560.10
Miscellaneous Rents	169,633.89	Interest on Securities, Loans and Discounts	93,308.80
Interest	1,725,949.58	Non-Operating Revenue	28,391.14
Amortization of Debt Discount and Expense	73,118.55		
Misc. Deductions from Income	8,333.00		
Dividend Appropriations of Income	1,440,000.00		

Debit	PROFIT AND LOSS	Credit
Other Deductions from Surplus	$ 42,096.66	Balance	$ 820,003.41
		Balance from Income Account	261,688.85
		Misc. Additions to Surplus	1,650.00

HOME TELEPHONE AND TELEGRAPH COMPANY OF PORTLAND, OREGON, GENERAL BALANCE SHEET DECEMBER 31, 1915

Debit	CAPITAL ACCOUNT		Credit	
Stocks and Bonds of other Companies owned by Respondent (give detail) — Albany, Corvallis, Oregon City and Independence	$ 148,600.00		Capital Stock	$ 3,000,000.00
Funded Debt Owned	1,256,600.00		Funded Debt	4,000,000.00
Stock in Treasury	325,291.67			
To Balance	5,269,508.33			
	$ 7,000,000.00			$ 7,000,000.00

Debit	ASSETS AND LIABILITIES		Credit	
Cash	$ 19,599.80		Loans and Bills Payable	$ 100,000.00
Bills Receivable	3,345.17		Audited Vouchers and Accounts	6,712.72
Accounts Receivable	23,136.94		Wages and Salaries	6,469.10
*Plant, Equipment, etc.	5,656,360.29		Unclaimed Dividends	952.50
Material and Supplies	101,468.34		Accrued Bond Interest	31,990.68
Other Assets (give detail)—Bonds Purchased	11,385.00		Multnomah County 1915 Taxes (not due)	19,913.33
			City of Portland, 1915 Franchise Tax	3,018.52
			By Balance	5,646,238.69
	$ 5,815,295.54			$ 5,815,295.54

*This item to be changed to conform to purpose for which franchise is granted.

Debit	INCOME ACCOUNT		Credit	
Operating Expenses	$ 32,917.32		Operating Revenue	$ 71,993.77
Taxes Accrued	6,096.93		By Balance	2,585.90
Other Interest	1,500.00			
Bond Interest Accrued	34,065.42			
	$ 74,579.67			$ 74,579.67

Debit	PROFIT AND LOSS		Credit	
Balance from Income of 3 Months	$ 2,585.90		Balance Sept. 30, 1915	$ 379,316.26
To Balance	376,730.36			
	$ 379,316.26			$ 379,316.26

HOME TELEPHONE AND TELEGRAPH COMPANY OF PORTLAND, OREGON, GENERAL BALANCE SHEET MARCH 31, 1916

Debit	CAPITAL ACCOUNT		Credit	
Stocks and Bonds of other Companies owned by Respondent (give detail) — Albany, Corvallis, Oregon City and Independence	$ 148,600.00		Capital Stock	$ 3,000,000.00
Funded Debt Owned	1,257,100.00		Funded Debt	4,000,000.00
Stock in Treasury	325,291.67			
To Balance	5,269,008.33			
	$ 7,000,000.00			$ 7,000,000.00

Debit	ASSETS AND LIABILITIES		Credit	
Cash	$ 38,922.24		Loans and Bills Payable	$ 100,000.00
Bills Receivable	3,530.17		Audited Vouchers and Accounts	10,197.35
Accounts Receivable	24,823.35		Wages and Salaries	7,004.25
*Plant, Equipment, etc.	5,651,777.36		Unclaimed Dividends	952.50
Material and Supplies	112,602.53		Accrued Bond Interest	63,601.85
Other Assets (give detail)—Bonds Purchased	11,385.00		Multnomah County 1915 Taxes (not due)	19,913.33
			Taxes, 3 Mos. of 1916, Estimated	6,412.36
			By Balance	5,634,959.01
	$ 5,843,040.65			$ 5,843,040.65

*This item to be changed to conform to purpose for which franchise is granted.

Debit	INCOME ACCOUNT		Credit	
Operating Expenses	$ 33,916.41		Operating Revenue	$ 65,157.77
Taxes Accrued	6,495.00		By Balance	10,779.68
Other Interest	1,500.00			
Bond Interest Accrued	34,026.04			
	$ 75,937.45			$ 75,937.45

Debit	PROFIT AND LOSS		Credit	
Balance from Income of 3 Months	$ 10,779.68		Balance Dec. 31, 1915	$ 376,730.36
To Balance	365,950.68			
	$ 376,730.36			$ 376,730.36

HOME TELEPHONE AND TELEGRAPH COMPANY OF PORTLAND, OREGON, GENERAL BALANCE SHEET JUNE 30, 1916

Debit	CAPITAL ACCOUNT		Credit	
Stocks and Bonds of other Companies owned by Respondent (give detail) — Albany, Corvallis, Oregon City and Independence	$ 148,625.00	Capital Stock	$ 3,000,000.00	
Funded Debt Owned	1,256,600.00	Funded Debt	4,000,000.00	
Stock in Treasury	325,291.67			
To Balance	5,269,483.33			
	$ 7,000,000.00		$ 7,000,000.00	

Debit	ASSETS AND LIABILITIES		Credit	
Cash	$ 818.11	Loans and Bills Payable	$ 100,000.00	
Bills Receivable	4,655.17	Audited Vouchers and Accounts	14,107.50	
Accounts Receivable	20,951.81	Wages and Salaries	6,079.45	
*Plant, Equipment, etc.	5,641,446.01	Unclaimed Dividends	907.50	
Material and Supplies	127,811.19	Accrued Bond Interest	39,133.87	
Other Assets (give detail)—Bonds Purchased	11,385.00	Multnomah County, one-half of 1915 Taxes (not due)	9,956.66	
		Taxes, 6 Months of 1916, Estimated	12,657.36	
		By Balance	5,624.224.95	
	$ 5,807,067.29		$ 5,807,067.29	

*This item to be changed to conform to purpose for which franchise is granted.

Debit	INCOME ACCOUNT		Credit	
Expenses	$ 30,327.35	Operating Revenue	$ 61,178.09	
Taxes Accrued (Estd.)	6,495.00	By Balance	11,209.06	
Other Interest	1,515.83			
Bond Interest Accrued	34,048.97			
	$ 72,387.15		$ 72,387.15	

Debit	PROFIT AND LOSS		Credit	
Balance from Income of 3 Months	$ 11,209.06	Balance Mar. 31, 1916	$ 365,950.68	
To Balance	354,741.62			
	$ 365,950.68		$ 365,950.68	

HOME TELEPHONE AND TELEGRAPH COMPANY OF PORTLAND, OREGON, GENERAL BALANCE SHEET SEPTEMBER 30, 1916

Debit	CAPITAL ACCOUNT		Credit	
Stocks and Bonds of other Companies owned by Respondent (give detail) — Albany, Corvallis, Oregon City and Independence	$ 148,625.00		Capital Stock	$ 3,000,000.00
Funded Debt Owned	1,256,600.00		Funded Debt	4,000,000.00
Stock in Treasury	325,291.67			
To Balance	5,269,483.33			
	$ 7,000,000.00			$ 7,000,000.00

Debit	ASSETS AND LIABILITIES		Credit	
Cash	$ 13,170.99		Loans and Bills Payable	$ 100,000.00
Bills Receivable	4,505.17		Audited Vouchers and Accounts	9,430.83
Accounts Receivable	21,536.75		Wages and Salaries	5,776.36
*Plant, Equipment, etc.	5,633,866.65		Unclaimed Dividends	907.50
Material and Supplies	137,440.76		Accrued Bond Interest	64,681.00
Other Assets (give detail)—Bonds Purchased	11,385.00		Multnomah County, one-half 1915 Taxes (not due)	9,956.66
			Taxes, 9 Months of 1916, Estimated	19,102.36
			By Balance	5,612,050.61
	$ 5,821,905.32			$ 5,821,905.32

*This item to be changed to conform to purpose for which franchise is granted.

Debit	INCOME ACCOUNT		Credit	
Operating Expenses	$ 27,538.43		Operating Revenue	$ 57,409.09
Taxes Accrued, Estd.	6,495.00		By Balance	12,174.34
Other Interest	1,500.00			
Bond Interest Accrued	34,050.00			
	$ 69,583.43			$ 69,583.43

Debit	PROFIT AND LOSS		Credit	
Balance from Income of 3 Months	$ 12,174.34		Balance June 30, 1916	$ 354,741.62
To Balance	342,567.28			
	$ 354,741.62			$ 354,741.62

AMERICAN DISTRICT TELEGRAPH COMPANY GENERAL BALANCE SHEET DECEMBER 31, 1915

Debit	ASSETS AND LIABILITIES		Credit
Accounts Receivable ...$	1,691.93	Advance Collections ....$	1,524.61
Debit	**INCOME ACCOUNT**		**Credit**
Operating Revenue from Signal Service .....$	5,806.12	Operating Expenses ....$	2,926.67
		Repairs	441.84
		General Expense	725.76
$	5,806.12	$	4,094.27
Debit	**PROFIT AND LOSS**		**Credit**
		Balance from Income Account .....$	1,711.85

AMERICAN DISTRICT TELEGRAPH COMPANY GENERAL BALANCE MARCH 31, 1916

Debit	ASSETS AND LIABILITIES		Credit
Account Receivable ....$	2,037.73	Advance Collections	1,907.40
Debit	**INCOME ACCOUNT**		**Credit**
Operating Revenue from Signal Service .....$	6,132.63	Operating Expenses ....$	2,639.35
		Repairs	599.56
		General Expense	766.57
$	6,132.63	$	4,005.48
Debit	**PROFIT AND LOSS**		**Credit**
		Balance from Income Account .....$	2,127.15

NORTHWESTERN ELECTRIC COMPANY GENERAL BALANCE SHEET DECEMBER 31, 1915

Debit	CAPITAL ACCOUNT	Credit	
Funded Debt Owned	$ 233,783.00	Capital Stock	$11,281,100.00
Unamortized Debt Disc. and Exp.	325,078.14	Funded Debt	3,260,000.00
Discount on Preferred Stock	248,310.00		

Debit	ASSETS AND LIABILITIES	Credit	
Cash	$ 48,771.36	Loans and Bills Payable	$ 1,172,500.00
Bills Receivable	396,725.80	Audited Vouchers and Accounts	117,669.01
Accounts Receivable	138,887.28	Wages and Salaries	1,466.90
*Plant	14,549,324.32	Accrued Interest	38,854.49
Material and Supplies	35,987.96	Accrued Taxes and Insurance	42,810.34
Accrued Income Not Due	40,748.90	Reserve For Accrued Depr.	759.16
Deferred Charges	24,816.23	Corporate Surplus Unappropriated	1,731.03
		Surplus Invested in Fixed Capital	34,612.52

*This item to be changed to conform to purpose for which franchise is granted.

Debit	INCOME ACCOUNT	Credit	
Operating Expenses	$ 110,466.72	Operating Revenue	$ 322,776.73
Taxes Accrued	24,255.09	Dividends on Stocks Owned	390.00
Interest	114,896.09	Interest on Funded Debts Owned	2,880.00
		Interest on Securities, Loans and Accounts	14,500.71

Debit	PROFIT AND LOSS	Credit	
		Balance	$ 34,612.52
		Balance from Income Account	90,929.54
			$ 125,542.06

NORTHWESTERN ELECTRIC COMPANY GENERAL BALANCE SHEET MARCH 31, 1916

Debit	CAPITAL ACCOUNT	Credit
Stocks and Bonds of other Companies owned by Respondent (give detail) ..... $ 233,883.00		Capital Stock $11,300,400.00
Unamortized Debt, Disc. and Exp. 350,484.71		Funded Debt 3,650,000.00
Discount on Preferred Stock 251,687.50		

Debit	ASSETS AND LIABILITIES	Credit
Cash ..... $ 13,986.85		Loans and Bills Payable. $ 805,000.00
Bills Receivable 397,030.50		Audited Vouchers and Accounts 82,745.71
Accounts Receivable ... 136,635.52		Wages and Salaries..... 3,607.45
*Plant 14,608,474.02		Consumers' Deposits ... 52.50
Material and Supplies.. 36,821.02		Services Billed in Advance 2,002.08
Accrued Income Not Due 43,293.12		Deferred Credit Items.. 2,387.40
Deferred Charges 43,260.52		Accrued Interest 95,882.95
Dividend Account 19,414.84		Accrued Taxes and Insurance 9,217.72
		Reserve for Accrued Depr. 433.68
		Corporate Surplus Unappropriated 1,045.14
		Surplus Inv. in Fixed Capital 34,612.52

*This item to be changed to conform to purpose for which franchise is granted.

Debit	INCOME ACCOUNT	Credit
Operating Expenses .... $ 176,540.19		Operating Revenues .... $ 511,789.68
Taxes Accrued 39,372.78		Dividends on Stocks Owned 780.00
Interest 175,072.67		Interest on Funded Debts Owned 5,897.03
		Interest on Securities, Loans and Discounts.. 20,103.38

Debit	PROFIT AND LOSS	Credit
		Balance ..... $ 34,612.52
		Balance from Income Account 147,584.45

NORTHWESTERN ELECTRIC COMPANY GENERAL BALANCE SHEET JUNE 30, 1916

CAPITAL ACCOUNT

Stocks and Bonds of other Companies owned by Respondent (give detail)	$ 233,896.50	Capital Stock	$11,341,700.00
Unamortized Debt, Disc. and Exp.	352,946.20	Funded Debt	3,750,000.00
Discount on Preferred Stock	258,292.50		

ASSETS AND LIABILITIES

Debit		Credit	
Cash	$ 27,527.76	Loans and Bills Payable	$ 820,000.00
Bills Receivable	396,882.05	Audited Vouchers and Accounts	43,452.66
Accounts Receivable	91,206.75	Wages and Salaries	3,788.41
*Plant	14,702,547.96	Consumers' Deposits	167.00
Material and Supplies	45,922.79	Deferred Credit Items	3,059.81
Accrued Income Not Due	49,633.31	Accrued Interest	42,129.37
Deferred Charges	41,005.76	Accrued Taxes	25,730.85
		Reserve for Accrued Depreciation	433.68
		Surplus Invested in Fixed Charges	34,612.52

*This item to be changed to conform to purpose for which franchise is granted.

INCOME ACCOUNT

Debit		Credit	
Operating Expenses	$ 239,812.43	Operating Revenues	$ 669,074.60
Taxes Accrued	54,236.45	Dividends on Stocks Owned	1,170.00
Interest	236,912.84	Interest on Funded Debts Owned	8,778.29
Dividends	38,928.89	Interest on Securities, Loans and Discounts	25,655.00

PROFIT AND LOSS

Debit		Credit	
		Balance	$ 34,612.52
		Balance from Income Account	134,787.28

NORTHWESTERN ELECTRIC COMPANY GENERAL BALANCE SHEET SEPTEMBER 30, 1916

Debit	CAPITAL ACCOUNT		Credit	
Stocks and Bonds of other Companies owned by Respondent (give detail)	$	233,896.50	Capital Stock	$11,693,500.00
Unamortized Debt, Disc. and Exp.		352,946.20	Funded Debt	3,750,000.00
Discount on Preferred Stock		314,588.00		

Debit	ASSETS AND LIABILITIES		Credit	
Cash	$	24,789.21	Loans and Bills Payable	$ 470,000.00
Bills Receivable		395,503.50	Audited Vouchers and Accounts	87,479.63
Accounts Receivable		100,328.82	Wages and Salaries	4,658.25
*Plant		14,757,904.87	Federal Income Tax Deduction	32.50
Material and Supplies		48,938.31	Consumers' Deposits	214.50
Accrued Income Not Due		57,614.56	Deferred Credit Items	4,645.16
Deferred Charges		37,607.38	Accrued Interest	96,119.63
			Accrued Taxes	40,379.90
			Reserve for Accrued Depreciation	433.68
			Surplus Invested in Fixed Capital	169,399.80
			Corporate Surplus Unappropriated	267.11

Debit	INCOME ACCOUNT		Credit	
Operating Expenses	$	55,421.02	Operating Revenues	$ 151,593.88
Taxes Accrued		15,095.25	Dividends on Stocks Owned	390.00
Interest		59,633.84	Interest on Funded Debts Owned	2,881.26
Dividends		23,455.12	Interest on Securities, Loans and Accounts	5,524.97
			Miscellaneous Revenues	202.31

Debit	PROFIT AND LOSS		Credit	
			Balance	$ 169,399.80
			Balance from Income Account	30,442.31

FRANCHISES

Ordinance No. 107—former City of Albina—entitled "An Ordinance authorizing the erecting, laying, stretching and maintaining of poles and wires for use in conducting electricity in the City of Albina by the Albina Light & Water Company and its assigns." Approved March 5, 1890. Expires, no time. Owned by Portland Railway, Light & Power Company.

Ordinance No. 183—former City of East Portland—entitled: "An Ordinance granting to the Oregon & California Railroad Company the right of way on First street." Passed June 17, 1876. Expires, no time. Owned by Oregon & California Railroad Company, leased by the Southern Pacific Railway.

Ordinance No. 310—former City of East Portland—entitled: "An Ordinance authorizing the Oregon Railway & Navigation Company to lay a railroad track and run cars over the same within the City of East Portland." Passed September 13, 1881. Expires, no time. Owned by the Oregon Railroad & Navigation Company. Amended by Ord. 26460.

Ordinance No. 595—former City of East Portland—entitled: "An Ordinance granting H. A. Hogue, C. P. Hogue and D. H. Jones, their successors and assigns, the right and privilege of erecting, constructing, maintaining and operating an electric light and power plant in the City of East Portland." Approved June 29, 1887. Expires, no time. Owned by Portland Railway, Light & Power Company.

Ordinance No. 631—former City of East Portland—entitled: "An Ordinance authorizing the Oregon Railway & Navigation Company to lay down railway tracks and run cars over the same, over, along and across certain streets in the City of East Portland, to connect with the bridge of the said company to be constructed across the Willamette River between the Cities of East Portland and Portland." Approved December 5, 1887. Expires, no time. Owned by the Oregon Railroad & Navigation Company. Sec. 2 repealed by Ord. 26459.

Ordinance No. 681—former city of East Portland—entitled: "An Ordinance authorizing George W. Brown, his successors or assigns, to construct, maintain and operate street railways in the City of East Portland, County of Multnomah, State of Oregon." Approved November 22, 1888. Expires, fifty years. Owned by the Portland Railway, Light & Power Company.

Ordinance No. 888—former City of East Portland—entitled: "An Ordinance authorizing George W. Brown, his successors and assigns, to construct, and maintain and operate a street railway on certain streets in the City of East Portland." Owned by the Portland Railway, Light & Power Company. Approved October 22, 1890. Expires, fifty years.

Ordinance No. 967—former City of East Portland—entitled: "An Ordinance confirming to the East Side Railway Company all the rights, privileges and franchises granted by Ordinance No. 888 entitled: 'An Ordinance authorizing George W. Brown, his successors, or assigns, to construct, maintain and operate a street railway on certain streets in the City of East Portland, Oregon.'" Approved May 22, 1891. Owned by the Portland Railway, Light & Power Company.

Ordinance No. 984—former City of East Portland—entitled: "An Ordinance authorizing George W. Brown, his successors or assigns,

to construct, maintain and operate an electric light and power plant in the City of East Portland, Multnomah County, Oregon." Approved June 25, 1891. Expires, no time. Owned by Portland General Electric Company.

Ordinance No. 2969, entitled: "An Ordinance authorizing the Oregonian Railway Company (limited) to lay a railway track and run cars over the same within the City of Portland." Approved January 7, 1881. Expires, no time. Owned by the Oregon & California Railway Company, and leased by the Southern Pacific Company.

Ordinance No. 3513, entitled: "An Ordinance granting the right of way through the streets of the City of Portland for laying pipes for the purpose of conveying water through and throughout the city." Approved July 21, 1882. Owned by Portland Railway, Light & Power Company.

Ordinance No. 3538, entitled: "An Ordinance authorizing the erection and maintaining of electric light wires and the necessary supports therefor on and over the streets of the City of Portland." Approved September 8, 1882. Expires, no time. Owned by Portland Railway, Light & Power Company.

Ordinance No. 3656, entitled: "An Ordinance authorizing the Northern Pacific Terminal Company of Oregon, its successors and assigns, to construct and maintain a double railway track on North Front street, in the City of Portland, from the northern limits of said city to the south line of 'P' street, and a single track from thence to a point opposite the southwest corner of Block G, and eighty feet distant therefrom with a side track from a point opposite to block 220 to block H, both in Couch's Addition to said City of Portland; also sufficient and suitable side tracks from, at, or near the foot of 'P' street, curving across and along East and West Park streets and M, N, O and P streets, and to confirm to the Oregon & California Railway Company the right to maintain and operate its main and side tracks in North Front street, in said city." Approved December 8, 1882. Expires, no time. Owned by the Northern Pacific Terminal Company of Oregon.

Ordinance No. 4932, entitled: "An Ordinance authorizing and directing a contract with P. F. Morey and his assigns, and authorizing and allowing the erection and maintaining of poles and wires used in connection with or as a part of electric light works, in, upon and over the streets, alleys and public parks and public grounds of the City of Portland." Approved October 7, 1886. Expires, no time. Owned by Portland Railway, Light & Power Company.

Ordinance No. 4942, entitled: "An Ordinance granting to the Northwestern American District Telegraph Company, of Oregon, the right and privilege of erecting, constructing, maintaining and operating its telegraph system in the City of Portland." Approved October 21, 1886. Expires, no time. Owned by American District Telegraph Company.

Ordinance No. 4995, entitled: "An Ordinance granting to the Pacific Postal Telegraph Cable Company the right and privilege of erecting, constructing, laying, maintaining and operating its telegraph lines in the City of Portland." Approved January 6, 1887. Expires, no time. Owned by the Postal Telegraph Cable Company.

Ordinance No. 5100, entitled: "An Ordinance granting to the Portland & Willamette Valley Railway Company, its successors and assigns, a right of way over certain lands belonging to the City of Port-

land." Approved June 17, 1887. Expires, no time. Owned by Oregon & California Railroad Company, leased by Southern Pacific Company.

Ordinance No. 5163, entitled: "An Ordinance authorizing the Oregon Railway & Navigation Company, its successors and assigns, to cross with bridge approach and tracks North Front street and North Third street, and to occupy portions of said streets." Approved August 19, 1887. Expires, no time. Owned by the Oregon Railroad & Navigation Company.

Ordinance No. 5568, entitled: "An Ordinance authorizing the Northern Pacific Terminal Company of Oregon to construct and maintain certain railroad tracks in and across certain streets in the City of Portland." Approved September 11, 1888. Expires, no time. Owned by the Northern Pacific Terminal Company.

Ordinance No. 7134, entitled: "An Ordinance to authorize and empower the Committee on Free Bridges to enter into a contract with the Columbia Street Bridge Company to purchase the bridge commonly known as the 'Madison Street Bridge,' and to grant to the Mount Tabor Street Railroad Company, and its assigns, the right of way across the same." Approved November 11, 1891. Expires, 30 years. Owned by the Portland Railway, Light & Power Company.

Ordinance No. 7443, entitled: "An Ordinance granting to the Highland Park Water Company the right of way through and across certain streets and avenues of that portion of the City of Portland known as Highland Park, Irvington Park, Woodlawn Heights, Cloverdale, Cloverdale Extension No. 1, Cloverdale Extension No. 2 and Columbia Heights, for laying pipes for the purpose of conveying water through and throughout said portion of said city." Approved March 3, 1892. Expires, 20 years. Owner unknown.

Ordinance No. 7578, entitled: "An Ordinance granting to the Investman Company the right of way through and across certain streets in the City of Portland, Oregon, for the purpose of laying pipes for conveying water." Approved April 25, 1892. Expires 20 years. Owned by City of Portland.

Ordinance No. 8101, entitled: "An Ordinance granting to the East Portland Gas Light Company the right to lay pipes and mains underground through the streets and alleys of that portion of the City of Portland lying on the east bank of the Willamette River, for the purpose of carrying gas into, through and throughout said portion of the City of Portland, and to supply the inhabitants thereof with gas." Approved January 5, 1893. Expires, no time. Owned by the Portland Gas and Coke Company.

Ordinance No. 8208, entitled: "An Ordinance granting to the Investment Company the right of way through and across certain streets in the City of Portland, Oregon, for the purpose of laying pipes for carrying water." Approved March 16, 1893. Expires 20 years. Owned by City of Portland.

Ordinance No. 8275, entitled: "An Ordinance authorizing the East Side Railway Company, its successors or assigns, to construct, maintain and operate a street railway on East Eleventh street, in the City of Portland, Oregon." Approved May 4, 1893. Expires, 30 years. Owned by the Portland Railway, Light & Power Company.

Ordinance No. 8419, entitled: "An Ordinance granting to the Western Union Telegraph Company the right to place and maintain its poles and lines in the streets, alleys and public ways of the City of Portland, State of Oregon, on the terms and conditions herein

stated." Approved July 21, 1893. Expires, no time. Owned by Western Union Telegraph Company.

Ordinance No. 8445, entitled: "An Ordinance authorizing the East Side Railway Company, its successors or assigns, to construct, maintain and operate a street railway on Madison street, in the City of Portland, County of Multnomah, State of Oregon." Approved August 4, 1893. Expires, 30 years. Owned by the Portland Railway, Light & Power Company.

Ordinance No. 9190, entitled: "An Ordinance granting to the East Side Railway Company, its successors and assigns, certain rights on East Water street, etc." Approved March 22, 1895. Owned by the Portland Railway, Light & Power Company.

Ordinance No. 9291, entitled: "An Ordinance to vacate a portion of Third street, between the north line of Glisan street and the north line of Hoyt street, and to authorize the Oregon Railway & Navigation Company, its successors and assigns, to construct upon the part of said Third street so vacated an elevated roadway from Third street, connecting with the upper deck of the steel bridge of said railway crossing the Willamette River." Approved June 6, 1895. Expires, no time. Franchise granted by Section 2. Owned by the Oregon Railway & Navigation Company.

Ordinance No. 9363, entitled: "An Ordinance authorizing Charles E. Smith, G. Glass and Adolph A. Dekum, or assigns to construct, maintain and operate a system of street railways in the City of Portland." Approved July 18, 1895. Expires, 30 years. Owner, Portland Railway Company.

Ordinance No. 9641, entitled: "An Ordinance granting to L. Zimmerman the right to construct, establish and carry on or operate upon this property in the City of Portland, a packing and meat business." Approved February 12, 1896. (Repealed by Ordinance No. 10560). Approved December 2, 1897. Owned by L. Zimmerman.

Ordinance No. 11086, entitled: "An Ordinance authorizing the placing of a permanent railway track in Upshur street between the westerly line of Fifteenth street to a point 100 feet westerly from the west line of Eighteenth street, in Watson's Addition to the City of Portland, Multnomah County, Oregon." Approved January 9, 1899. Expires, 33 years. Owned by the Northern Pacific Terminal Company.

Ordinance No. 11111, entitled, "An Ordinance authorizing the Oregon Railroad & Navigation Company, its successors and assigns, to lay a railroad track upon certain streets in the City of Portland, and to run cars and locomotives over the same." Approved January 21, 1899. Expires, no time. Owned by the Oregon Railroad & Navigation Company.

Ordinance No. 11270, entitled: "An Ordinance authorizing the Eastern Lumber Company to construct and maintain a side track of standard gauge across Front street and to connect with the track of the Northern Pacific Railroad Company on Sherlock avenue, between Colton and Hull streets." Approved June 28, 1899. Expires, 30 years. Owned by the Northern Pacific Terminal Company.

Ordinance No. 11279, entitled: "An Ordinance to authorize the Oregon & California Railroad Company to construct an embankment in lieu of the existing trestle on East Stark street, East Portland, now City of Portland, and to construct thereunder a tubular culvert for drainage purposes." Approved June 6, 1899. Expires, no time. Owned

by Oregon & California Railroad Company. Leased by the Southern Pacific Company.

Ordinance No. 12590, entitled: "An Ordinance granting to the Pacific States Telephone and Telegraph Company, its successors and assigns, the right and privilege to continue to maintain and operate its present telephone and telegraph system, to erect and maintain such additional poles and wires as may be necessary for its telephone and telegraph business and to maintain and operate an underground telephone and telegraph system, for the period of twenty-five years, in, under and upon the streets, alleys, and public highways of the City of Portland, and to repeal all existing franchises and ordinances under which the said Pacific States Telephone and Telegraph Company is now operating or could operate in any part of the City of Portland." Approved February 21, 1902. Expires, 25 years. Owned by Pacific States Telephone and Telegraph Company.

Ordinance No. 13054, entitled: "An Ordinance authorizing the Northern Pacific Terminal Company of Oregon to place a side track on Front street." Approved November 11, 1902. Expires, no time. Owned by the Northern Pacific Terminal Company.

Ordinance No. 13053, entitled: "An Ordinance granting to the Oregon Water Power & Railway Company, its successors and assigns, the right and privilege to construct and to maintain and operate railways in the City of Portland." Approved November 10, 1902. Expires, 25 years. Owned by the Portland Railway, Light & Power Company.

Ordinance No. 13089, entitled: "An Ordinance granting to Portland Railway Company, its successors and assigns, the right to construct, acquire and own and to maintain, operate and use railways and poles and wires and underground conduits, cables and conductors in the City of Portland, Oregon." Approved November 25, 1902. Expires 31st day of December, 1927. Owned by Portland Railway, Light & Power Company.

Ordinance No. 13113, entitled: "An Ordinance granting to the Oregon Water Power & Railway Company, and its successors and assigns, the right and privilege to construct and to maintain and operate railways in the City of Portland." Approved December 18, 1902. Expires, 25 years. Owned by the Portland Railway, Light & Power Company.

Ordinance No. 13177, entitled: "An Ordinance granting to the City & Suburban Railway Company, its successors and assigns, the right to construct, acquire and own and to maintain and use railways and poles, and wires and underground conduits, cables and conductors in the City of Portland, Oregon." Approved, January 13, 1903. Expires 31st day of December, 1932. Owned by the Portland Railway, Light & Power Company. Amended by Ordinance No. 17848.

Ordinance No. 13791, entitled: "An Ordinance granting to the Oregon Water Power & Railway Company, a corporation, its successors and assigns, the right to substitute for the street car fenders described in the act of the Legislative Assembly of the State of Oregon, entitled, 'An Act to require all individuals, firms, associations, companies and corporations, owning, managing or operating any street railway, to provide suitable aprons, fenders or guards on street cars, and providing a penalty for violation thereof.' Approved February 17, 1903, the street car fender hereinafter referred to, and granting said corporation the right to use said substituted street car fender on all

cars operated by it in the City of Portland." Approved February 6, 1904.

Ordinance No. 13897, entitled: "An Ordinance granting to the City Messenger & Delivery Company, a corporation, its successors and assigns, the right, franchise and privilege to erect poles and string wires thereon; to construct underground conduits, and to lay wires in underground conduits and to stretch wires along, over, upon and across the streets, avenues and public places of the City of Portland, Oregon, for the transmission of electric current to be used solely and exclusively in connection with a messenger system and service and a call-box system; and to establish, maintain and operate a messenger system and service and a system of call-boxes and fixing the compensation to be paid therefor." Approved April 8, 1904. Owned by City Messenger & Delivery Company. Expires, 25 years.

Ordinance No. 14083, entitled: "An Ordinance authorizing the Oregon Water Power and Railway Company, a corporation, to construct and maintain a sentry box at the intersection of Hawthorne avenue and East First Street, City of Portland, Multnomah County, Oregon, and to authorize and require the removal of the sentry box from the place where the same is now located at the intersection of Hawthorne Avenue and East First street." Approved July 8, 1904. Owned by the Portland Railway, Light & Power Company.

Ordinance No. 14699, entitled: "An Ordinance granting to Charles E. Summer, his successors and assigns, the right, privilege and franchise to erect poles and string wires and cables thereon; to construct underground conduits and manholes and to lay wires and cables in underground conduit and through manholes, and to stretch wires and cables along, over, upon and across streets, alleys and avenues and public places of the City of Portland, for the transmission of sounds, signals, conversation and intelligence through and over said wires and cables by means of electricity, and to construct, establish, equip and install a telephone and telegraph system, and to conduct a general telephone and telegraph business within the City of Portland, and fixing the compensation to be paid therefor." Owned by the Home Telephone and Telegraph Company. Expires, 25 years. By proclamation, July 1, 1905.

Ordinance No. 15427, entitled: "An Ordinance granting to the United Railways Company, its successors and assigns, the right to construct, lay down, maintain and operate railways, poles and wires and underground conduits in the City of Portland, Oregon." Owned by the United Railways Company. Expires, 25 years. Became a law June 5, 1906, without Mayor's signature.

Ordinance No. 15428, entitled: "An Ordinance granting to the Willamette Valley Traction Company, its successors and assigns, the right to construct, lay down, maintain and operate railways, poles and wires and underground conduits in the City of Portland, and to operate cars over certain streets in said City of Portland, in accordance with the provisions of an ordinance entitled, 'An Ordinance granting to the United Railways Company, its successors and assigns, the right to construct, lay down, maintain and operate railways, poles and wires and underground conduits in the City of Portland, Oregon.' " Owned by the Oregon Electric Railway Company. Expires, 25 years. Became a law June 5, 1906, without Mayor's signature.

Ordinance No. 16730, entitled: "An Ordinance granting to the Economy Gas Company, its successors and assigns, the right to construct, acquire, own, maintain, conduct and operate a plant or plants

for the manufacture and distribution of gas in the City of Portland, Oregon, to sell gas for domestic and other purposes, and to lay pipes and mains for the purpose of conducting and distributing said gas through, in and over said city." Owned by the Economy Gas Company. Expires, 25 years. Proclamation by the Mayor, June 14, 1907.

Ordinance No. 17853, entitled: "An Ordinance granting to the United Railways Company, its successors and assigns, the right to construct, lay down, maintain and operate railways and poles and wires and underground conduits in the City of Portland, Oregon, and repealing Ordinance No. 14564." Owned by the United Railways Company. Expires, 25 years. Approved May 26, 1908.

Ordinance No. 19176, entitled: "An Ordinance granting to Portland Railway, Light & Power Company, its successors and assigns, the right to construct, acquire and own, and to maintain, operate and use railways and street railways and poles and wires and underground conduits, cables and conductors in the City of Portland, Oregon." Owned by the Portland Railway, Light & Power Company. Expires, 25 years. Passed over Mayor's veto April 28, 1909.

Ordinance No. 20479, entitled: "An Ordinance granting to the Oregon Railroad & Navigation Company, a corporation, its successors and assigns, the franchise and right to construct and equip, own, maintain and operate a railway track and sidetracks, all of standard gauge, extending from a connection with the constructed railroad of said company at the intersection of East Ankeny street and East Second street, and thence in a southeasterly direction crossing East Ash street to East Third street, and extending thence southerly along East Third street from a point between East Ash street and East Pine street to Hawthorne avenue, and to operate locomotives and cars over the same, in the City of Portland." Owned by the Oregon Railroad & Navigation Company. Approved December 10, 1909. Expires, 25 years.

Ordinance No. 21735, entitled: "An Ordinance granting to Heights Trust Company, its successors and assigns, the right to construct, acquire and own, and to maintain, operate and use railways and street railways, and poles and wires and underground conduits, cables and conductors in the City of Portland, Oregon." Amended by Ordinance No. 23554. Owned by the Heights Trust Company. Approved July 28, 1910. Expires, December 31, 1932.

Ordinance No. 22539, entitled: "An Ordinance granting to the Oregon Electric Railway Company, a corporation, its successors and assigns, the right to construct, lay down, maintain and operate railways, poles and wires and underground conduits in the City of Portland, Oregon." Amended by Ordinance No. 25998. Owned by the Oregon Electric Railway Company. Approved December 14, 1910. Expires, 25 years. Amended by Ordinance No. 25998.

Ordinance No. 22540, entitled: "An Ordinance granting to Abe Tichner, his heirs, executors, administrators and assigns; the Oregonian Publishing Company, a corporation; the Portland Railway, Light & Power Company, a corporation; and College Endowment Association, a corporation, their successors and assigns, the right and privilege to construct, maintain and use an underground conduit for the purpose of conducting pipes for steam heat, fuel-oil and water across Alder street, between Sixth and Seventh streets, in the City of Portland, Oregon." Owned by Abe Tichner, Oregonian Publishing Company, Portland Railway, Light & Power Company and College

Endowment Association. Approved December 17, 1910. Expires, 25 years.

Ordinance No. 22989, entitled: "An Ordinance granting to the Mount Hood Railway & Power Company, its successors and assigns, for a period of twenty-five years, the right and privilege to erect, construct, maintain and operate an electric plant, heat and power system in the City of Portland, Oregon, and the right and privilege to erect poles and stretch wires thereon, and thereover, through, over and upon the streets, alleys and public highways, and to construct underground conduits or pipes, with all necessary man-holes and other appliances in and under the said streets, alleys and public highways in the City of Portland, for conducting and conveying electricity for light, heat and power, to charge rents and tolls therefor, and to collect the same, and authorize the said Mount Hood Railway & Power Company to trim shade and ornamental trees in the said streets, alleys and public highways, and granting right of way for conduit, canal or flume over and across the northwest quarter of the southwest quarter of section five (5), township two (2) south, range five (5), east of the Willamette Meridian, and to provide for the punishment of those injuring or interfering with its property." Owned by Mount Hood Railway & Power Company. Approved March 31, 1911.

Ordinance No. 23237, entitled: "An Ordinance granting to Heights Trust Company, its successors and assigns, the right to construct, acquire and own, and to maintain, operate and use railways and street railways, and poles and wires and underground conduits, cables and conductors in the City of Portland, Oregon." Owned by Heights Trust Company. Approved April 29, 1911. Expires, December 31, 1932. Amended by Ordinance 23554.

Ordinance No. 23256, entitled: "An Ordinance designating certain public streets of the City of Portland across and over which the Oregon-Washington Railroad & Navigation Company, a railway corporation of the State of Oregon, its successors and assigns, may and shall locate and construct its railroad and railroad tracks for the purpose of making connection with its proposed tracks on its new steel bridge being constructed across the Willamette River, with the tracks of the said company on the west side of the river in the City of Portland, and with the tracks and terminal facilities to be used by said company in connection therewith, and designating certain other public streets in the City of Portland across and over which said Oregon-Washington Railroad & Navigation Company, its successors and assigns, may and shall locate and construct its railroad and tracks to make connection between its present tracks, now located on Railroad street, with the railroad tracks of its new line of railroad constructed and being constructed by way of the peninsula between the Willamette and Columbia rivers to facilitate the entrance into the City of Portland of said new line of railroad; and designating likewise certain other streets on the east side of the Willamette River and in the neighborhood of the east approach to the new steel railroad bridge being constructed by said Oregon-Washington Railroad & Navigation Company across the Willamette River, over and across which said Oregon-Washington Railroad & Navigation Company, its successors and assigns, may and shall locate and construct its railroad and tracks to make connection between the railroad tracks of said company to be laid over the said railroad bridge and the line of railroad of the said company on the east side of the Willamette River." Owned by the Oregon-Washington

Railroad & Navigation Company. Approved May 11, 1911. Expires, 25 years.

Ordinance No. 23257, entitled: "An Ordinance authorizing the Oregon-Washington Railroad & Navigation Company, its successors and assigns, to occupy certain parts of Glisan, First and Front streets for the construction and maintenance thereon and thereover of a bridge approach to the proposed new railroad bridge being constructed over the Willamette River by the Oregon-Washington Railroad & Navigation Company, successor to the Oregon Railroad & Navigation Company." Owned by The Oregon-Washington Railroad & Navigation Company. Approved May 11, 1911. Expires, 25 years.

Ordinance No. 24198, entitled: "An Ordinance designating certain streets of the City of Portland across, over and along which the Oregon-Washington Railroad & Navigation Company, a railway corporation, of the State of Oregon, its successors and assigns, may and shall locate and construct its railroad and railroad tracks for its line from St. Johns to Troutdale." Owned by the Oregon-Washington Railroad & Navigation Company. Approved October 22, 1911. Expires, 25 years.

Ordinance No. 25930, entitled: "An Ordinance granting to the Northwestern Electric Company, a corporation, its successors and assigns, for a period of 25 years the right and privilege to erect, construct, maintain and operate an electric light, heat and power system in the City of Portland, Oregon, and the right and privilege to erect poles and stretch wires thereon and thereover, through, over and upon streets, alleys and public highways, and to construct underground conduits or pipes with all necessary manholes and other appliances in and under the said streets, alleys and public highways in the City of Portland for the conducting and conveying electricity for light, heat and power, to charge rents and tolls therefor, and to collect the same, and authorizing the said Northwestern Electric Company to trim shade and ornamental trees in the said streets, alleys and public highways." Owned by the Northwestern Electric Company. Approved October 1, 1912.

Ordinance No. 25997, entitled: "An Ordinance granting to F. E. Dooly, John H. Hall, L. H. Tarpley and W. O. Van Schuyver, their successors or assigns, the right to lay and maintain pipes, conduits and apparatus for the construction of a hot water and steam heating plant under certain streets, avenues, alleys and public places of the City of Portland, Oregon, and to charge rents and tolls therefor; and to regulate the construction of said heating plant and provide penalties for the violation of this ordinance." Owned by F. E. Dooley, John H. Hall, L. H. Tarpley and W. O. Van Schuyver. Approved October 8, 1912. Expires, 25 years.

Ordinance No. 26080, entitled: "An Ordinance granting to Portland Railway, Light & Power Company, its successors and assigns, the right to construct, acquire and own, and to maintain, operate and use railways and street railways and poles and wires and underground conduits, cables and conductors in the City of Portland, Oregon." Owned by the Portland Railway, Light & Power Company. Approved October 10, 1912. Expires, December 31, 1932.

Ordinance No. 26511, entitled: "An Ordinance granting to the Oregon & California Railroad Company, a corporation, its successors, lessees, and assigns, the right to construct, lay down, maintain and operate railways, poles and wires, and underground conduits in the City of Portland, Oregon." Owned by the Oregon & California Railroad Company. Approved January 16, 1913. Expires, 25 years.

Ordinance No. 26512, entitled: "An Ordinance granting to the Oregon & California Railroad Company, a corporation, its successors, lessees and assigns, the right to lay, construct, and maintain railway tracks and to operate cars thereover, and to transport passengers, mail, baggage and express thereon, and to erect, construct, maintain and operate necessary power, telephone and telegraph lines on Fourth street in the City of Portland, Multnomah County, Oregon, and along and over the right of way of the Oregon & California Railroad Company now there, within the corporate limits of the City of Portland, Multnomah County, Oregon, and the right to cross any and all streets to the southern limits of the said City of Portland, or any extension thereof, intersecting said right of way." Owned by the Oregon & California Railroad Company. Approved January 16, 1913. Expires, 25 years.

Ordinance No. 26513, entitled: "An Ordinance granting to Spokane, Portland & Seattle Railway Company, a corporation, its successors and assigns, the right and privilege of laying down, constructing and maintaining standard gauge railway tracks for a commercial railroad, and to operate locomotives and cars, and to transport passengers, mail, baggage, express and freight, on certain streets." Owned by Spokane, Portland & Seattle Railway Company. Approved January 16, 1913. Expires, 25 years.

Ordinance No. 26648. An Ordinance granting to Portland Railway, Light & Power Company, its successors and assigns, the right to construct, acquire and own, and to maintain, operate and use railways and street railways and poles and wires and underground conduits, cables and conductors in the City of Portland, Oregon. Franchise owned by the Portland Railway, Light & Power Company. Approved February 21, 1913. Expires, December 31, 1932.

Ordinance No. 27160. An Ordinance granting to Northwestern Electric Company, a corporation, its successors and assigns, for a period of twenty-five years, the right and privilege to lay down, maintain and operate steam pipes and conduits through and under the streets, alleys and public highways in the city of Portland for the transmission of heat and the operating of a steam heating plant and business in said city. Franchise owned by Northwestern Electric Company. Approved June 6, 1913. Expires, 25 years.

Ordinance No. 27235. An Ordinance granting to the Errol Heights Railway Company (an Oregon corporation), grantee, its successors and assigns, the franchise, right and privilege of constructing, maintaining and operating a line of railway, with the necessary poles, wires, underground conduits, conductors and other appliances for the operation thereof, in, upon and over certain streets in the City of Portland, Oregon. Franchise owned by the Errol Heights Railway Company. Approved June 14, 1913. Expires, 25 years.

Ordinance No. 28481. An Ordinance granting to United Railways Company, its successors and assigns, the right and privilege of laying down, constructing and maintaining a commercial railway, with poles, wires and underground conduits in the City of Portland. Passed by the Council February 4, 1914. Expires, 25 years.

Ordinance No. 28619. An Ordinance granting to Portland Railway, Light & Power Company, its successors and assigns, the right to construct, acquire and own, and to maintain, operate and use railways and street railways and poles and wires and underground conduits, cables and conductors in the City of Portland, Oregon. Passed by the Council March 4, 1914. Expires December 31, 1932.

Ordinance No. 29238. An Ordinance granting to Portland Railway, Light & Power Company, its successors and assigns, rights, privileges and franchises to operate cars on and over bridges across the Willamette River in the City of Portland, Oregon, and the approaches of such bridges. Passed by the Council July 22, 1914. Expires December 31, 1932.

Ordinance No. 29481. An Ordinance granting to the Portland and Oregon City Railway Company, a corporation, already formed, its successors and assigns, the right and privilege of laying down, constructing and maintaining railways, poles, wires and underground conduits in the City of Portland, Oregon. Passed by the Council September 9, 1914. Expires, 25 years.

Ordinance No. 30132, entitled: "An Ordinance granting to United Railways Company, its successors and assigns, the right and privilege of laying down, constructing and maintaining a commercial railway, with poles, wires and underground conduits in the City of Portland." Owned by United Railways Company. Passed by the Council February 10, 1915. Expires June 1, 1933.

St. Johns Ordinance No. 144. An Ordinance granting to the Home Telephone and Telegraph Company of Portland, Oregon, its successors and assigns, the right to lay and maintain underground conduits and wires and to construct necessary manholes, make house connections and erect poles and thereon to fasten wires on the streets and alleys, and to operate a telephone and telegraph system in the City of St. Johns, State of Oregon. Passed by the Common Council of the City of St. Johns, May 28, 1907. Expires 25 years.

St. Johns Ordinance No. 148. An Ordinance, granting to the Pacific Telephone and Telegraph Company, its successors and assigns, the right and privilege to continue to maintain and operate its present telephone and telegraph system, to erect and maintain such additional poles, and wires as may be necessary for its telephone and telegraph business, and to maintain and operate an underground telephone and telegraph system for the period of twenty-five years in, under and upon the streets, alleys and public highways of the City of St. Johns, State of Oregon, and to exercise the privilege of operating telephone and telegraph instruments within said City of St. Johns, Oregon. Passed by the Council, August 20, 1907. Expires, 25 years.

St. Johns Ordinance No. 237. An Ordinance granting to the Portland Gas Company, its successors and assigns, a right to lay pipes and mains in, along, upon and under any and all streets, avenues, lanes, alleys, squares and public places, including bridges, in said City of St. Johns for the purpose of carrying and distributing gas for illuminating, heating and kindred purposes into, through and throughout the City of St. Johns, and to sell said gas to the inhabitants thereof, as well as to the said City of St. Johns, Oregon, and also to own, maintain and operate a plant for the manufacture of said gas. Passed by the Council June 1, 1909. Expires 25 years.

St. Johns Ordinance No. 312. An Ordinance granting to Portland Railway, Light and Power Company, its successors and assigns, the right to construct, acquire and own, and to maintain, operate and use railways and street railways, and poles and wires and underground conduits, cables and conductors, in the City of St. Johns, Oregon. Passed by the Council, August 23, 1910. Expires, until and including the first day of June, 1935.

St. Johns Ordinance No. 388. An Ordinance authorizing The Ore-

gon Railroad & Navigation Company, its successors and assigns, to lay a side track and run cars over and along the north side of Bradford street, between a point on the main line of The Oregon Railroad & Navigation Company one hundred (100) feet westerly along the said main line from the west line of John street to a point fifty (50) feet east of the east line of Burlington street, all in the City of St. Johns. Passed by the Council June 7, 1911. Expires, 25 years.

St. Johns Ordinance No. 508. An Ordinance granting to Portland Railway, Light and Power Company, its successors and assigns, the right to construct, acquire and own, and to maintain, operate and use poles, wires and underground conduits, cables and conductors in the City of St. Johns, Oregon. Approved by the Mayor, October 8, 1912. Expires, until and including the first day of July, 1937.

St. Johns Ordinance No. 572. An Ordinance authorizing the Oregon-Washington Railroad & Navigation Company, its successors and assigns, to lay a side track and run cars over and along the same on the north side of Bradford street, between a point on the main line of the Oregon-Washington Railroad & Navigation Company, which is 55 feet east of the east line of Philadelphia street and the east line of Alta street, a total distance of 355 feet on said Bradford street, all in the City of St. Johns. Passed by the Council November 5, 1913. Expires, 25 years.

Respectfully submitted,

A. L. BARBUR
Auditor of the City of Portland.

LIST OF REVOCABLE PERMITS GRANTED BY ORDINANCE SINCE 1890.

TEMPORARY RAILWAY TRACKS AND SWITCHES

Ordinance No. 6742. Temporary railway track in "U" street between westerly line of Fourteenth street and 100 feet west of west line of Sixteenth street. Northern Pacific Terminal Co.

Ordinance No. 7626. Side track in front of block 20, Stephens Addition for accommodation of Dr. J. Surman. Oregon & California Railway Co.

Ordinance No. 7811. Side track in Front street from intersection of Front and Quimby streets to connect with coal bunkers on lots 38, 39, 40 and 41, block 318, Couch's Addition. Oregon Improvement Co.

Ordinance No. 8099. Side track on Fourth street from 10 feet North of the north line of Hoyt street to north line of Glisan street for accommodation of Union Meat Co. Oregon & California R. R. Co.

Ordinance No. 8209. Spur track on East First street in front of block 22, Stephens Addition for accommodation of R. M. Wade & Co. Oregon & California Railway Co.

Ordinances Nos. 8263 and 8339. Side track on East First street from 120 feet south of south line of block 22, Stephens Addition to center line of East Main street for accommodation of R. M. Wade and Wm. M. Ladd. Oregon & California Railway Co.

Ordinance No. 9278. Side track on Ninth street from 100 feet north of the north line of Johnson street to north line of Irving street for accommodation of J. McCraken Co. Northern Pacific Terminal Co.

Ordinance No. 11405. Side track in Wilson street from Sherlock avenue to point 300 feet west. Northern Pacific Terminal Co.

Ordinance No. 13183. Side track on Fourth street opposite south one-half of block W, Couch's Addition. Oregon & California R. R. Co.

Ordinance No. 14004. Side track on Upshur street from intersection Terminal and Upshur street to 20 feet east of east line of Seventeenth street for accommodation of Everding & Farrell. Northern Pacific Terminal Co.

Ordinance No. 14241. Move sidewalk and lay railway track in diagonal roadway between Union Depot and Front street. Northern Pacific Terminal Co.

Ordinance No. 14724. Side track on Ninth street from 100 feet south of Irving street to Hoyt street for accommodation of Woodard Clarke & Co. Northern Pacific Terminal Co.

Ordinance No. 14861. Side track on North Front street near intersection of Tenth and Quimby streets to connect with coal bunkers of Holmes Coal & Ice Co. Northern Pacific Terminal Co.

Ordinance No. 14964. Side track on Upshur street in front of block 28, Watson's Addition. Northern Pacific Terminal Co.

Ordinance No. 15462. Spur track on Sherlock avenue at 100 feet north of Hull street to boiler works in block 37, Sherlock's Addition. Willamette Iron & Steel Works.

Ordinance No. 15713. Side track on North Thirteenth street from 100 feet south of Irving street to Glisan street. Northern Pacific Terminal Co.

Ordinance No. 16003. Side track on York street from Sherlock avenue to 150 feet west of Twenty-fourth street. Northern Pacific Terminal Co.

Ordinance No. 16152. Side track and switches on Fifteenth street from Upshur street to Marshall street. Portland & Seattle Railway Co.

Ordinance No. 16235. Side track in Railroad street in front of block 59, Albina, for accommodation of E. H. Ingham. Oregon Railway & Navigation Co.

Ordinance No. 16480. Side track and switches on East First street between East Morrison street and East Main street for accommodation of Fisher, Thorsen & Company. Oregon & California Railway Co.

Ordinance No. 16780. Side track and spur track on East Alder street between East Water street and Willamette River. Portland Fuel Co.

Ordinance No. 17359. Side track and switches on Fifteenth street from north line of Marshall street to north line of Johnson street. Portland & Seattle Railway Co.

Ordinance No. 17798. Side track and switches on Thirteenth street between Glisan street and 100 feet north of Burnside street. Northern Pacific Terminal Co.

Ordinance No. 18323. Single track on north side Upshur street between Seventeenth and Nineteenth streets. Northern Pacific Terminal Co.

Ordinance No. 18388. Side track and switch on East First street between East Morrison street and East Taylor street. Oregon & California Railway Co.

Ordinance No. 18649. Side track on East First street between East Oak and East Washington street. National Cold Storage & Ice Co.

Ordinance No. 19344. Side track and switches on Fifteenth street from north line of Johnson street to north line of Glisan street. Spokane, Portland & Seattle Railway Co.

Ordinance No. 19905. Single track on Hoyt street from south line of block 113 to north line of block 112, Couch's Addition. Northern Pacific Terminal Co.

Ordinance No. 20147. Two railroad tracks across Front street to lots 22 and 23, River Block 2, Doscher's Addition. B. E. Martin.

Ordinance No. 21716. Side track and spur across a portion of Russell and Marion streets for accommodation of Edlefsen Fuel Co. Oregon Railway & Navigation Co.

Ordinance No. 22147. Single track railway on Upshur street from 100 feet west of North Eighteenth street to east line of North Twentieth street. Northern Pacific Terminal Co.

Ordinance No. 22253. Spur track on North Front street at North Tenth street. Northern Pacific Terminal Co.

Ordinance No. 22293. Spur track on Macadam street from United Railways Co. track. Portland Furniture Manufacturing Co.

Ordinance No. 22534. Spur track from P. R. L. & P. Co.'s track at intersection of Lombard and Newell streets to point in Newell street 450 feet north therefrom. Francis I. McKenna.

Ordinance No. 22536. Electric railway on Villa avenue and Hassalo street. Mt. Hood Railway & Power Co.

Ordinance No. 22708. Railway track on East Main street from East Water street to Willamette River. Columbia Contract Co.

Ordinance No. 23336. Side track on East First street between East Washington and East Alder. H. H. Brown.

Ordinance No. 23627. Spur track from main line of O-W. R. & N. Co. crossing Williams avenue and Winchell street. Oregon-Washington Railway & Navigation Co.

Ordinance No. 23628. Single track railway from west line of Tenth street between Lovejoy and Marshall to block 199, Couch's Addition, and return. Spokane, Portland & Seattle Railway Co.

Ordinance No. 23633. Spur track from a point 700 feet west of Brandon street across Brandon and Derby streets. Oregon Railway & Navigation Co.

Ordinance No. 23796. Spur track on Macadam street between Gaines street and Lane street connecting with United Railway Co.'s track. Fisher, Thorsen & Co.

Ordinance No. 24029. Single track railway over certain streets (expires Sept. 26, 1913). Mt. Hood Railway & Power Co.

Ordinance No. 24328. Spur track east side of Front street from 30 feet north of Davis street to north line of East Couch street. United Railways Co.

Ordinance No. 24329. Side track east side of Ninth street from north line of Hoyt street to 100 feet south of south line of Hoyt street. Northern Pacific Terminal Co.

Ordinance No. 24704. Street railway track on Bybee avenue and Reed College Place. Reed Institute.

Ordinance No. 24892. Change from double track to single track on Raleigh street from 85 feet east of Twenty-fifth street to 90 feet east of Twenty-fourth street. Portland Railway, Light & Power Co.

Ordinance No. 25154. Spur track from point in block 32, East Portland, southeasterly across East Second street to East Flanders; thence easterly to a point between Union avenue and Grand avenue. Oregon-Washington Railway & Navigation Co.

Ordinance No. 25592. Railroad track across Tenth street and Pettygrove street. Spokane, Portland & Seattle Railway Co.

Ordinance No. 25643. Single track electric railway on Pettygrove street, Quimby street, Westover Road and Cumberland Road. Lewis-Wiley Hydraulic Co.

Ordinance No. 25776. Side track in front of block B, Creston (expires Aug. 21, 1913). Percy & Strickler Co.

Ordinance No. 25781. Electric railway on Lewelling avenue, Knapp avenue and Eschelman street. Fred A. Jacobs et al (See Ord. 25986).

Ordinance No. 25896 Single track railroad across Division street near Tenth street. Ford Motor Co.

Ordinance No. 26138. Railway track across Clackamas street 100 feet west of east line of block 45, Laurelhurst. Rose City Coal & Supply Co.

Ordinance No. 26246. Railway tracks across Northrup, Overton street and Tenth street connecting with block 224, Couch's Addition. Spokane, Portland & Seattle Railway Co.

Ordinance No. 26388. Side track on East First street in front of block 42, East Portland for accommodation of Portland Seed Co. Oregon & California Railway Co.

Ordinance No. 26395. Spur track from connection with block 32, East Portland, southeasterly across East Second and East Flanders, East Davis, East Everett, and East Couch streets. Oregon-Washington Railway & Navigation Co.

Ordinance No. 26461. Railway track on East Salmon street, East Ninth street and East Tenth street. Pacific Bridge Co.

Ordinance No. 26801. Railway track on Dekum avenue from East Thirteenth street to East Twenty-fourth street. Portland Railway, Light & Power Co.

Ordinance No. 27227. Spur track from point between Peninsular avenue and Calvert street to south line of block 56, Peninsular Addition No. 4. Oregon-Washington Railway & Navigation Co.

Ordinance No. 27660. Spur track on East First street between East Main street and East Salmon street for accommodation of Edlefsen Fuel Co. Oregon & California R. R. Co.

Ordinance No. 28347. Industrial spur track on East First street from a point six feet north of East Alder street to a point 216 feet south from beginning point. Oregon & California R. R. Co.

Ordinance No. 28348. Erect and maintain trolley poles through a tract of land owned by City of Portland at Palatine Hill. Portland, Eugene & Eastern Ry. Co.

Ordinance No. 28349. Industrial spur track on East First street from East Flanders street to East Burnside street. Southern Pacific Co.

Ordinance No. 28350. Industrial spur track on York street between Twenty-first and Twenty-second streets. M. F. Brady & Son.

Ordinance No. 28640. Switch cars on Stark street from Twelfth street to West Park street between 12 P. M. and 6 A. M. United Railways Co.

Ordinance No. 28655. Electric railway spur track across intersection of Third and Hoyt streets. Oregon & California R. R. Co.

Ordinance No. 28671. Operate freight trains on North Front street in the daytime. Spokane, Portland & Seattle Ry. Co.

Ordinance No. 28771. Railroad track to connect North Front street with Municipal Dock No. 1. Northern Pacific Terminal Co.

Ordinance No. 28790. Side track across Powell Valley Road near East Fiftieth street. A. M. Ellsworth, Receiver.

Ordinance No. 29361. Industrial railway track on East First street from East Pine street to East Stark street. O. & C. R. R. Co. & S. P. Co.

Ordinance No. 30368, entitled, "An Ordinance granting a revocable permit to Northern Pacific Terminal Company of Oregon, a corporation, to construct, lay down, use and maintain a standard gauge railway track in Front street from a point of connection with the present track in said Front street at or near the intersection of Front street with Seventeenth street, to Municipal Dock No. 1, in the City of Portland, and declaring an emergency." Passed by the Council April 16, 1915. Held by Northern Pacific Terminal Company of Oregon.

Ordinance No. 30968, entitled, "An Ordinance granting revocable permits to Oregon and California Railroad Company, its successors, lessees and assigns, to construct and maintain industrial railway spur tracks over, across and along certain streets in the vicinity of said Company's East Side Freight Yards in the City of Portland, Oregon, and fixing the conditions and restrictions governing said revocable permits." Passed by the Council October 6, 1915. Held by Oregon and California Railroad Company.

Ordinance No. 30276. Electric railway track on Cumberland Road. Lewis-Wiley Hydraulic Company.

Ordinance No. 30369. Standard gauge railway track in East Oak street between East First and East Water streets. Commission of Public Docks.

Ordinance No. 30422. Standard gauge railway track from a point in East First street between East Oak street and East Stark street

to trackage to Municipal Dock No. 2. Oregon & California Railroad Company.

Ordinance No. 30636. Standard gauge industrial spur track over and across East Ninth street and Division street. Oregon & California Railroad Company.

Ordinance No. 30743. Standard gauge spur track in East Second street from north line of East Ankeny street to a point 120 feet north therefrom. Spokane-Portland & Seattle Railway Company and Oregon-Washington Railroad & Navigation Co.

Ordinance No. 30854. Standard gauge railway track in Front street from Seventeenth street to Municipal Dock No. 1. Northern Pacific Terminal Company.

Ordinance No. 32250. Industrial track on Goldsmith street; Hancock Land Company.

Ordinance No. 31556. Railway track and shaft in Dana street; A. Guthrie & Company, Inc.

PORTE COCHERE, AWNINGS, ETC.

Ordinance No. 11735. Porte Cochere over Alder street entrance of Meier & Frank Co. Meier & Frank Co.

Ordinance No. 13645. Porte Cochere over sidewalk at 149 Seventh street. L. E. Hamilton.

Ordinance No. 13909. Porte Cochere at 126 Sixth street. Bijou Theatre Co.

Ordinance No. 14394. (See Stairways.)

Ordinance No. 14584. Two Porte Cochere in front of Hotel Belvidere at Fourth and Alder streets. F. Stroebel & Co.

Ordinance No. 14758. Porte Cochere on Stark street between Seventh and Park streets. Wright Dickinson Co.

Ordinance No. 17714. Porte Cochere in front of 311 Alder street and 128 Sixth street. Strobel & Barenstecher.

Ordinance No. 17865. Porte Cochere in front of 131 Sixth street. Bakeronian Amusement Co.

Ordinance No. 21413. Wire glass awnings on buildings constructed on blocks 138 and 141, Couch's Addition. Fidelity Investment Co.

Ordinance No. 26254. Marquise entrance on building on Fourth street known as Dekum Annex. Circle Amusement Co.

Ordinance No. 26672. Marquise on south side of building located on lot 1, block 91, Couch's Addition. Wadhams & Kerr Bros.

Ordinance No. 26892. Marquise at northeast corner of Third and Alder streets. Owners.

Ordinance No. 26904. Marquise in front of theater on lot 7, block 175. Rector Realty Co.

Ordinance No. 28269. Marquise at southeast corner of Thirteenth and Hoyt streets. Ella Eisenbach.

Ordinance No. 30932. Marquise on warehouse at Fifteenth and Overton streets. Mason-Ehrman Company.

SIDEWALKS, BRIDGES AND STAIRWAYS

Ordinance No. 12082. Elevated bridge across Front street at Seventeenth street. J. A. Martin & Co.

Ordinance No. 13181. Raised sidewalk on Thirteenth street in front of lots 5 and 8, block 137, Couch's Addition. M. Seller & Co.

Ordinance No. 13511. Open stairway on Park street in front of lot 1, Park block 3. L. Therkelsen.

Ordinance No. 13761. Open stairway on Yamhill street in front of lot 5, block 251. J. D. Brown.

Ordinance No. 14088. Elevated sidewalk in front of lots 6 and 7, Block 136, Couch's Addition. Pacific Grain Co.

Ordinance No. 14394. Stairway and Porte Cochere in front of lot 1, south one-half of block 85, Portland. Western American Co.

Ordinance No. 14593. Open stairway on Fourteenth street in front of lot 1, block 312. Robert Wilson.

Ordinance No. 15008. Raised sidewalk in front of east 100 feet of south one-half of block 184, Couch's Addition. John A. Roeblings Sons Co.

Ordinance No. 15458. Stairway on Jefferson street near Second street. Meier & Frank Co.

Ordinance No. 15670. Stairway to basement of building on east side of Fourteenth street, 100 feet north of Washington street. Edgar M. Lazarus.

Ordinance No. 15723. Raised sidewalk on East Salmon street in front of lots 1 and 8 in block 134, Hawthorne Park. Crystal Ice & Storage Co.

Ordinance No. 15996. Steps from sidewalk on east side of Williams avenue 36 feet south of south line of Clackamas street. A. F. Swenson & Co.

Ordinance No. 16884. Elevated sidewalk on Third, Fourth and Hoyt streets in front of north one-half of block "O," Portland. Jos. & Sam Simon.

Ordinance No. 16887. Raised sidewalk on East Second street in front of lots 1, 2, 3 and 4, block 58, East Portland. Mitchell, Lewis & Staver Co.

Ordinance No. 17038. Elevated sidewalk on north side of Holladay avenue between 750 feet and 800 feet west of west line of East Twenty-eighth street. Blake-McFall Co.

Ordinance No. 17395. Vent in sidewalk on east side of Fifth street 40 feet south of Morrison street. H. W. Corbett Estate.

Ordinance No. 18965. Elevated sidewalk in front of lots 1 and 4, block 27, Watson's Addition. Carman Manufacturing Co.

Ordinance No. 19061. Elevated sidewalk in front of lot 2, block 204, Couch's Addition. F. V. Holman.

Ordinance No. 19177. Elevated sidewalk on east side of Thirteenth street between Davis and Everett streets. W. P. Fuller Co.

Ordinance No. 19984. Elevated sidewalk along Fifteenth street in front of lot 8, block 140, Couch's Addition. Owners.

Ordinance No. 19985. Elevated sidewalk along Fifteenth street in front of lot 7, block 183, Couch's Addition. Owners.

Ordinance No. 20831. Elevated sidewalk on East First street in front of lots 5 and 6, block 18, East Portland. Owners.

Ordinance No. 21414. Elevated sidewalk on east side of Fifteenth street between Johnson and Lovejoy streets. Fidelity Investment Co.

Ordinance No. 22302. Open stairway on Park street leading into Medical Building. F. O. Downing.

Ordinance No. 22633. Elevated plank roadway on north side of East Alder street between East Water street and Willamette River, including standard gauge track thereon. Nickum & Kelly.

Ordinance No. 22858. Elevated sidewalk on East Second street between East Morrison and East Alder streets. John Deere Plow Co.

Ordinance No. 22962. Elevated sidewalk on East Stark street from 50 feet east of East Water street to 100 feet east of East Water street. Owner of lot 1, block 21, East Portland.

Ordinance No. 24907. Elevated sidewalk on Eighteenth street between Thurman and Upshur streets. Owner lot 5, block 21, Watson's Addition.

Ordinance No. 25222. Elevated platform in front of pier 4, Broadway bridge. Albers Bros. Milling Co.

Ordinance No. 25670. Elevated platform at northwest corner of Fifteenth and Kearney streets. A. N. Moores.

Ordinance No. 26151. Elevated platform at southwest corner of Fifteenth and Hoyt streets. Multnomah Building Co.

Ordinance No. 26232. Elevated platform in front of lot 1, block 2, Blackistone's Addition. Macleay Estate Co.

Ordinance No. 26233. Elevated platform in front of lot 1, block 3, Blackistone's Addition. Macleay Estate Co.

Ordinance No. 26394. Elevated platform in front of lots 1 and 4, block 91, Couch's Addition. Wadhams & Kerr Bros.

Ordinance No. 27661. Elevated platform on east side of Fifteenth street between Thurman and Savier streets. Owners of lots 6 and 7, block 13, Watson's Addition.

Ordinance No. 27802. Wooden platform on south side of Irving street between Fifth and Sixth streets. Lutke Manufacturing Co.

Ordinance No. 28074. Elevated walk near northwest corner of Seventeenth and Upshur streets. Bridge & Beach Manufacturing Co.

Ordinance No. 28380. Wooden stairway on Occident street near Oregon street. Southern Pacific Co.

Ordinance No. 28636. Elevated platform in front of lots 6 and 7, block 99, Couch Addition. W. P. Crawford.

Ordinance No. 28832. Elevated platform in front of lots 1 and 2, block 44, East Portland. D. P. Thompson Co.

Ordinance No. 28940. Elevated platform on York street near Twenty-second street. W. M. Brady.

Ordinance No. 29186. Elevated platform on west side of Thirteenth street between Flanders and Glisan streets. The Goodyear Tire & Rubber Co.

Ordinance No. 29187. Trestle driveway on East Madison street west of East Water street.

Ordinance No. 29726. Elevated wooden sidewalk on east side of Second street north of Belmont street. Owner of lots 3 and 4, block 58, East Portland.

Ordinance No. 30406. Elevated platform in Harrison street, 150 feet east of Water street. Portland Lumber Company.

Ordinance No. 30451. Elevated platform on north side of East Ankeny street, between East Second and East Third streets. Oscar A. Heintz.

Ordinance No. 30632. Elevated wooden sidewalk on Fifteenth street in front of lot 5, block 121, Couch Addition. D. P. Thompson Company.

Ordinance No. 30834. Elevated platform on west side of Fifteenth street, at Overton street, in front of block 212, Couch's Addition. Mason-Ehrman & Company.

Ordinance No. 30933. Elevated roadway and platform in East Pine street, adjacent to block 23, East Portland. Standard Box and Lumber Company.

Ordinance No. 32033. Elevated platform on Thirteenth street, between Kearney and Lovejoy streets; Edward Campbell.

Platform and boiler on Ankeny street, east of Front street; Hazelwood Company.

FUEL OIL AND GASOLINE STORAGE

Ordinance No. 15101. Fuel oil tank at southwest corner of Sixth and Oak streets. Wells Fargo & Co.

Ordinance No. 16518. Gasoline tank at southwest corner of Sixteenth and Alder streets. Portland Motor Car Co.

Ordinance No. 16572. Gasoline tank on East Third street between East Ash and East Ankeny streets. Herman Enke.

Ordinance No. 17001. Fuel oil tank in front of lot 2, Park block 2, on west side of Park street between Washington and Alder streets. C. W. Cornelius.

Ordinance No. 17037. Two fuel oil tanks on east side of Fifth street between 64 feet and 84 feet south of south line of Morrison street. H. W. Corbett Estate.

Ordinance No. 17358. Two tanks for storage of lubricating oils under sidewalk on Thirteenth street in front of lots 2 and 3, block 18, Couch's Addition. W. P. Fuller & Co.

Ordinance No. 17617. Oil tank on block 7, Couch's Addition. Portland Gas Co.

Ordinance No. 17713. Fuel oil tank in Seventh street in front of lots 6 and 7, north one-half of block 85, Portland. Beck Investment Co.

Ordinance No. 18207. Fuel oil tank on south one-half of block 8, East Portland. Warren Bros. Co.

Ordinance No. 18525. Two fuel oil tanks under east sidewalk on Sixth street between Morrison and Alder streets. Meier & Frank Co.

Ordinance No. 18708. Fuel oil tank on west side of Fifteenth street 75 feet south of south line of Glisan street. Lipman, Wolfe & co.

Ordinance No. 19137. Fuel oil tank on west side of East Sixth street 100 feet south of East Taylor street. Neustadter Bros.

Ordinance No. 19178. Fuel oil tank on north side of Broadway, 75 feet west of Grand avenue. State Laundry.

Ordinance No. 19259. Fuel oil tank on east side of Fourth street, 50 feet north of Stark street. Owners of Chamber of Commerce Bldg.

Ordinance No. 19602. Fuel oil tank on East Yamhill street, between Grand avenue and East Sixth street. United States Laundry Co.

Ordinance No. 20144. Fuel oil tank on East Water between East Washington street and East Stark street. National Cold Storage & Ice Co.

Ordinance No. 20556. Fuel oil tank, east side of Seventh street, 100 feet north of north line of Washington street. Imperial Hotel Co.

Ordinance No. 20695. Fuel oil tank on west side of Second street, 30 feet north of Everett street. Opera House Laundry Co.

Ordinance No. 20699. Fuel oil tank in West Park street, between Taylor and Salmon streets. Arlington Club.

Ordinance No. 20944. Two fuel oil tanks on west side of Third street, 90 feet north of Washington street. Jas. Stewart & Co.

Ordinance No. 20945. Fuel oil tank on Alder street, 80 feet west of Fourth street. Morgan, Fliedner & Boyce.

Ordinance No. 21149. Fuel oil tank on north side of East Everett street, 75 feet east of East Tenth street. Palace Laundry Co.

Ordinance No. 21926. Fuel oil tank on north side Belmont street, 100 feet east of East Seventh street. New York Bakery Co.

Ordinance No. 22044. Fuel oil tank on Alder street, between Fourth and Fifth streets. J. B. Yeon.

Ordinance No. 22051. Fuel oil tank on northeast corner of Twenty-first and Irving streets. S. B. Barker.

Ordinance No. 22294. Fuel oil tank under sidewalk on Yamhill street, 50 feet east of east line of Third street. Donald Mackay.

Ordinance No. 22330. Fuel oil tank on Sixth street, between Taylor and Yamhill streets. Y. M. C. A.

Ordinance No. 22532. Fuel oil tank on lots 6 and 7, block 2, Sherlock's Addition. Cocoanut Products Co.

Ordinance No. 22535. Fuel oil tank in front of lots 5 and 6, block 318, Couch's Addition. Albers Bros. Milling Co.

Ordinance No. 22614. Fuel oil tank in front of west 50 feet of lots 5 and 6, block 220, Portland. F. M. Warren.

Ordinance No. 22615. Fuel oil tank on west side of Sixth street, 100 feet south of Alder street. Ben Selling.

Ordinance No. 22859. Fuel oil tank on Seventeenth street, 112 feet south of south line of Raleigh street. Stein Bros.

Ordinance No. 22863. Fuel oil tank on south side of Jefferson street at southeast corner of Thirteenth street. Carmelita Apartments.

Ordinance No. 22864. Fuel oil tank in front of 43 Trinity Place. Trinity Place Investment Co.

Ordinance No. 22977. Fuel oil tank on East Water street, 5 feet north of East Washington street. Charles Smith.

Ordinance No. 22978. Fuel oil tank on block 11, East Portland. O'Reilly and Burpee.

Ordinance No. 23040. Fuel oil tank at northwest corner of Sixth and Alder streets. "The Oregonian."

Ordinance No. 23041. Fuel oil tank at southwest corner of Burnside and Fourteenth streets. I. Lowengart.

Ordinance No. 23140. Fuel oil tank at southwest corner of Sixth and Washington streets. T. B. Wilcox.

Ordinance No. 23141. Fuel oil tank on west side of East Ninth street, 80 feet north of East Yamhill street. Oregon Packing Co.

Ordinance No. 23231. Fuel oil tank on west side of Seventh street, 100 feet north of Mill street. School District No. 1.

Ordinance No. 23232. Fuel oil tank on East Clay street in front of lot 4, block 80, Stephens Addition. National Laundry Co.

Ordinance No. 23545. Fuel oil tank in front of 789 Northrup street. H. C. Stevens.

Ordinance No. 23546. Fuel oil tank on southwest corner of East Davis and East Sixth streets. F. F. Haradon & Son.

Ordinance No. 23548. Fuel oil tank on north side of Hawthorne avenue, 80 feet west of Grand avenue. E. A. Baldwin.

Ordinance No. 23631. Fuel oil tank on west side of Fifth street, 80 feet north of north line of Oak street. Portland Commercial Club.

Ordinance No. 23632. Fuel oil tank on east side of North Tenth street, 40 feet north of the north line of Burnside street. Z. Swett et al.

Ordinance No. 23788. Fuel oil tank at southwest corner of Twelfth and Taylor streets. Fred Fritz.

Ordinance No. 23789. Fuel oil tank on lot 4, block 134, City of Portland. Edward Holman.

Ordinance No. 23790. Fuel oil tank on west side of Sixth street, 40 feet north of Washington street. H. E. Wood and E. R. Pittelkau.

Ordinance No. 23792. Fuel oil tank on East Ninth street, 80 feet north of Schuyler street. P. J. McDonalds.

Ordinance No. 23793. Fuel oil tank in front of 432 Hawthorne avenue. Damascus Creamery.

Ordinance No. 23794. Fuel oil tank at foot of Tenth street. Balfour-Guthrie Co.

Ordinance No. 23803. Fuel oil tank at northeast corner of Marion avenue and East Ninth street. Mt. Hood Brewing Co.

Ordinance No. 23805. Fuel oil tank at northwest corner of East Stark and East Thirteenth streets. Enterprise Bakery.

Ordinance No. 23806. Fuel oil tank at northeast corner of Park and Morrison streets. Joseph Healey.

Ordinance No. 23932. Fuel oil tank, southwest corner Third and Washington streets. Sweeny Investment Co.

Ordinance No. 23933. Fuel oil tank east side of North Twenty-second street, 85 feet north of north line of Glisan street. M. Ballay.

Ordinance No. 24026. Fuel oil tank at southwest corner of Third and Oak streets. Wm. Sherlock Co.

Ordinance No. 24027. Fuel oil tank at southeast corner of Oak and Third streets. Portland Trust Co.

Ordinance No. 24094. Fuel oil tank at southeast corner of Hooker street and Southern Pacific right of way. Multnomah County.

Ordinance No. 24095. Fuel oil tank on south side Washington street, 80 feet west of Fifth street. Corbett Estate et al.

Ordinance No. 24097. Fuel oil tank on west side of Twenty-first street, 50 feet south of Washington street. Covey Motor Car Co.

Ordinance No. 24109. Fuel oil tank on north side of Davis street, 90 feet east of Third street. R. R. Thompson Estate Co.

Ordinance No. 24110. Fuel oil tank at southeast corner of East Eleventh and East Flanders streets. Franz Bros.

Ordinance No. 24111. Fuel oil tank south side of Ash street, 30 feet west of Third street. R. R. Thompson Estate Co.

Ordinance No. 24330. Fuel oil tank at southeast corner of St. Clair and Washington streets. Mrs. E. J. Frohman.

Ordinance No. 24341. Fuel oil tank on west side of Twelfth street in front of lot 1, block 107, Couch's Addition. H. J. Ottenheimer.

Ordinance No. 24398. Fuel oil tank on east side of Ninth street at intersection of Irving street, vacated. Northern Pacific Terminal Co.

Ordinance No. 24399. Fuel oil tank on north side of East Oak street, 75 feet east of East Sixth street. International Laundry Co.

Ordinance No. 24400. Fuel oil tank on east side of West Park street, 80 feet north of Alder street. L. G. Clarke and W. F. Woodward.

Ordinance No. 24401. Fuel oil tank on east side of Twelfth street, 75 feet north of Washington street. Cramer & Fries.

Ordinance No. 24496. Fuel oil tank on north side of East Flanders

street, between Union avenue and East Third street. E. Henry Wemme.

Ordinance No. 24497. Fuel oil tank on north side of Washington street, 60 feet west of west line of Fifth street. Estate of Stephen Meade.

Ordinance No. 24498. Fuel oil tank on north side of Washington street, 85 feet east of east line of Twentieth street. Mrs. P. M. Dekum.

Ordinance No. 24635. Fuel oil tank on east side of Third street, 50 feet south of south line of Washington street. W. C. Alvord, Agt.

Ordinance No. 24636. Fuel oil tank on south side of East Davis street, 90 feet west of west line of Union avenue. W. O. Jackson.

Ordinance No. 24637. Fuel oil tank at southeast corner of Seventh and Yamhill streets. Journal Publishing Co.

Ordinance No. 24787. Fuel oil tank on north side of Taylor street, 150 feet west of Seventh street. Heilig Theater Co.

Ordinance No. 24826. Fuel oil tank at northeast corner of East Twenty-first and East Glisan streets. Crystal Laundry Co.

Ordinance No. 24996. Fuel oil tank at northwest corner of Twentieth and Kearney streets. R. F. Wassell.

Ordinance No. 24997. Fuel oil tank at northwest corner of East Fifteenth and Belmont streets. Bailey, Taylor & Lambert.

Ordinance No. 25068. Fuel oil tank at southeast corner of First and Multnomah streets. M. Olsen.

Ordinance No. 25213. Fuel oil tank at southwest corner of East Twenty-first and Irving streets. House of Good Shepherd.

Ordinance No. 25396. Fuel oil tank on block 19, Riverside Homestead. Portland Railway, Light & Power Co.

Ordinance No. 25397. Fuel oil tank at southwest corner of Tenth and Stark streets. Crown Trust Co.

Ordinance No. 25398. Fuel oil tank at southwest corner of Seventh and Oak streets. S. Benson.

Ordinance No. 25426. Fuel oil tank in front of 26 North Fifteenth street. Laher Auto Spring Co.

Ordinance No. 25473. Fuel oil tank at southeast corner of Twenty-third and Hoyt streets. Wright Investment Co.

Ordinance No. 25474. Fuel oil tank at southeast corner of Fifth and Alder streets. Failing Estate.

Ordinance No. 25475. Fuel oil tank in front of 178 Hooker street. School Board.

Ordinance No. 25499. Fuel oil tank on north side of Yamhill street, 80 feet west of the west line of Lownsdale street. Rufus Mallory.

Ordinance No. 25589. Fuel oil tank at 206 Porter street. Miss A. R. Rundle.

Ordinance No. 25590. Fuel oil tank at northeast corner of East Couch street and Union avenue. Chambers & Widmer.

Ordinance No. 25738. Fuel oil tank on west side of Front street, 60 feet south of southerly line of Nicolai street. Portland Railway, Light & Power Co.

Ordinance No. 25739. Two fuel oil tanks on west side of Tenth street, between Pettygrove and Quimby streets. Spokane, Portland & Seattle Co.

Ordinance No. 25824. Gasoline tank on north side of Ankeny street, between Fourth and Fifth streets. Pacific Paper Co.

Ordinance No. 25825. Fuel oil tank on east side of East Third

street, 215 feet north of the north line of East Glisan street. American Laundry Co.

Ordinance No. 25826. Fuel oil tank on south side of Yamhill street, 20 feet west of Tenth street. Multnomah County Library Association.

Ordinance No. 25827. Fuel oil tank on east side of Thirteenth street, 60 feet north of Alder street. Mrs. H. Rieman.

Ordinance No. 25841. Gasoline filling station at 1063 Hawthorne avenue. H. O. Peck.

Ordinance No. 25842. Gasoline filling station at northwest corner of Twenty-third street and Cornell road. Portland Motor Car Co.

Ordinance No. 25897. Fuel oil tank at 644 Lovejoy street. Barrett Estate.

Ordinance No. 25978. Fuel oil tank at 531 East Thirteenth street. Star Drilling Machine Co.

Ordinance No. 25979. Fuel oil tank at 209 North Thirteenth street. Edward Campbell.

Ordinance No. 26049. Fuel oil tank on block "Z," Westover Terrace. Central Heating Co.

Ordinance No. 26050. Fuel oil tank on west side of East Eleventh street, between East Alder and East Morrison streets. J. D. Wharton.

Ordinance No. 26051. Fuel oil tank at 64-66 Trinity Place. Metropolitan Investment & Imp. Co.

Ordinance No. 26135. Fuel oil tank at northeast corner of Second and Yamhill streets. Strowbridge Estate.

Ordinance No. 26214. Fuel oil tank at northeast corner of Fifth and Columbia streets. Amelia C. Seeley.

Ordinance No. 26299. Fuel oil tank at southeast corner of East Thirteenth and East Ash streets. Owner Lots 1 and 2, Block 279, Aiken's Addition.

Ordinance No. 26300. Fuel oil tank at northwest corner of Thirteenth and Davis streets. Wadhams & Kerr Bros.

Ordinance No. 26301. Fuel oil tank at northwest corner of Seventh and Morrison streets. Multnomah Security Co.

Ordinance No. 26302. Gasoline filling station at southeast corner of East Eighth and Hawthorne avenue. Paquet Garage Co.

Ordinance No. 26303. Fuel oil tank at northeast corner of Sixth and Jefferson streets. University Club.

Ordinance No. 26430. Gasoline filling station at 717 Hawthorne avenue. Auto Truck Service Co.

Ordinance No. 26431. Gasoline filling station at northeast corner of Alder and Lownsdale streets. Oregon Auto Exchange.

Ordinance No. 26432. Gasoline filling station at southeast corner of East Seventh and East Ankeny streets. Tyrell & King Transportation Co.

Ordinance No. 26628. Fuel oil tank at southeast corner of East Thirty-seventh and Belmont streets. J. M. Wallace and P. Schuele.

Ordinance No. 26725. Fuel oil tank at 2-4 North Front street. Spaulding Estate.

Ordinance No. 26726. Fuel oil tank at southwest corner of Seventh and Washington streets. Morgan Bushong Investment Co.

Ordinance No. 26727. Fuel oil tank at northeast corner of Seventh and Burnside streets. Matichner Bros.

Ordinance No. 26794. Fuel oil tank at southwest corner of Third and Flanders streets. Otto W. Nelson.

Ordinance No. 26795. Gasoline filling station at northwest corner of Broadway and Burnside streets. E. H. Wemme.

Ordinance No. 26796. Gasoline filling station at 374 Wasco street. Ralph B. Lloyd.

Ordinance No. 26887. Gasoline filling station at northeast corner of Thirteenth and Hawthorne avenue. Kadderly and Francis.

Ordinance No. 26888. Fuel oil tank at northeast corner of East Pine and East Tenth streets. Troy Laundry Co.

Ordinance No. 26889. Gasoline filling station at northeast corner of East Fifteenth and Broadway. Povey Brothers.

Ordinance No. 26890. Fuel oil tank at 632 Tillamook street. F. E. Bowman Co.

Ordinance No. 26949. Gasoline filling station at northwest corner of Sixth and Oak streets. Portland Railway, Light & Power Co.

Ordinance No. 26950. Gasoline filling station at 192½ Fourth street. Central Investment Co.

Ordinance No. 27066. Fuel oil tank at 57 Lucretia Place. S. Silverfield.

Ordinance No. 27067. Gasoline filling station at 364 Ross street. Bell Maham.

Ordinance No. 27068. Gasoline filling station at northeast corner of Front and Ankeny streets. Spaulding Estate.

Ordinance No. 27131. Fuel oil tank at northwest corner of Thirteenth and Salmon streets. I. M. Buell.

Ordinance No. 27209. Fuel oil tank at southwest corner of East Eleventh and East Flanders streets. J. W. Vogan.

Ordinance No. 27213. Four oil intakes and pipes in Stark street, between West Park and Tenth streets. Northwestern Electric Co.

Ordinance No. 27238. Gasoline filling station on west side of Williams avenue, between Failing and Shaver streets. J. N. Muzzy.

Ordinance No. 27430. Fuel oil tank on north side of Marshall street, 160 feet east of Twenty-third street. Good Samaritan Hospital Co.

Ordinance No. 27446. Gasoline filling station at 229 Salmon street. T. H. Richardson.

Ordinance No. 27447. Fuel oil tank at northeast corner of Third and Couch streets. A. C. Pike.

Ordinance No. 27448. Gasoline filling station at 1152 Belmont street. John Eder.

Ordinance No. 27505. Gasoline filling station at 760 Halsey street. J. Wood Smith.

Ordinance No. 27547. Gasoline filling station at northeast corner of Couch and Broadway. C. Henri Labbe.

Ordinance No. 27548. Fuel oil tank at southwest corner of East Thirteenth and East Morrison streets. R. F. Wassell & Co.

Ordinance No. 27589. Fuel oil tank at northeast corner of Morrison and Broadway. Northwestern National Bank.

Ordinance No. 27590. Gasoline filling station at 190 Chapman street. John McKinney.

Ordinance No. 27650. Fuel oil tank at northeast corner of Third and Alder streets. Fred Fritz.

Ordinance No. 27651. Fuel oil tank at southwest corner of Eighteenth and Flanders streets. W. R. Griffith.

Ordinance No. 27688. Gasoline filling station at 708 Division street. Augusta Jahnke.

Ordinance No. 27774. Fuel oil tank at East Eighth and Burnside streets. Page Investment Co.

Ordinance No. 27775. Gasoline filling station corner East Forty-fifth and Sandy Boulevard. Hartman & Thompson.

Ordinance No. 27776. Fuel oil tank at Park and Oak streets. Pacific Telephone & Telegraph Co.

Ordinance No. 27777. Gasoline filling station at 368 Union avenue. Fred K. Viereck.

Ordinance No. 27835. Fuel oil tank at Fourth and Alder streets. Henry Weinhard Estate.

Ordinance No. 27836. Fuel oil tank at East Sixteenth and Weidler streets. Charles Frazier.

Ordinance No. 27837. Fuel oil tank at West Park and Washington streets. T. B. Wilcox.

Ordinance No. 27838. Gasoline filling station at Broadway and Couch streets. C. Henri Labbe.

Ordinance No. 27880. Gasoline filling station at 207 East Sixth street North. Geo. W. Bracey.

Ordinance No. 27921. Fuel oil tank at Tenth and Hall streets. W. L. Woods.

Ordinance No. 27963. Fuel oil tank at 3 First street. Biddle, Thompson & Kelly.

Ordinance No. 27992. Fuel oil tank at Grand avenue and East Burnside streets. C. W. Williamson.

Ordinance No. 28029. Gasoline filling station at 840 Mississippi avenue. A. L. Sauvie.

Ordinance No. 28052. Eight fuel oil tanks at Tenth, between Stark and Washington streets. Northwestern Electric Co.

Ordinance No. 28070. Fuel oil tank at Sixth and Irving streets. J. M. James Estate.

Ordinance No. 28113. Fuel oil tank at Williams avenue and Stanton street. A. Christie.

Ordinance No. 28114. Gasoline filling station at East Twenty-fourth street and Broadway. J. C. Baird.

Ordinance No. 28264. Gasoline filling station at 127 Broadway. Ralph Hoyt.

Ordinance No. 28265. Gasoline filling station at 181 Sixth street Corbett Estate.

Ordinance No. 28266. Gasoline filling station at 314 East Morrison street. J. S. Beall.

Ordinance No. 28267. Gasoline filling station at 995 Hawthorne avenue. J. D. Harms.

Ordinance No. 28298. Gasoline filling station at northeast corner of East Thirty-eighth street and Sandy Boulevard. A. Spier.

Ordinance No. 28299. Gasoline filling station at 15 North Ninth street. E. Meyers.

Ordinance No. 28345. Gasoline filling station at southwest corner of East Water and East Madison streets. O'Reiley and Burpee.

Ordinance No. 28346. Fuel oil tank at southwest corner of East Eleventh and Division streets. Ford Motor Co.

Ordinance No. 28392. Gasoline filling station at 1610 East Thirteenth street. D. M. Donaugh.

Ordinance No. 28393. Fuel oil tank at northwest corner of Tenth and Hall streets. W. L. Woods.

Ordinance No. 28497. Gasoline filling station at 12 Second street. Biddle, Thompson & Kelly.

Ordinance No. 28498. Gasoline filling station at southeast corner of Sixteenth and Alder streets. Leslie Scott.

Ordinance No. 28499. Gasoline filling station at 128½ Broadway. McGinn Estate.

Ordinance No. 28550. Gasoline tank at 430 Hawthorne avenue. Peter and Andrew Vetsch.

Ordinance No. 28589. Gasoline filling station at southeast corner of East Second and Broadway. R. J. O'Neil.

Ordinance No. 28590. Fuel oil tank at southeast corner East Twenty-third and East Irving streets. E. M. Rasmussen & Son.

Ordinance No. 28591. Gasoline filling station at 478 East Eleventh street. Milton Hager.

Ordinance No. 28605. Gasoline filling station at 886 Union avenue North. C. A. Colfelt.

Ordinance No. 28606. Gasoline filling station at 191 Fourth street. L. B. Menefee.

Ordinance No. 28650. Gasoline filling station at 726 Division street. Martin Fromme.

Ordinance No. 28700. Gasoline filling station at 526 Alder street. H. E. Coleman.

Ordinance No. 28701. Gasoline filling station at 704 Kearney street. Wm. Reidt.

Ordinance No. 28747. Gasoline filling station at 335 Ankeny street. C. A. Malarkey.

Ordinance No. 28830. Gasoline filling station at southeast corner of Tenino avenue and East Seventeenth street. W. W. Wing and W. F. Neild.

Ordinance No. 28831. Fuel oil tank at southwest corner of Second and Everett streets. A. J. Peaper.

Ordinance No. 28860. Gasoline filling station at 431 East Eleventh street. H. P. Whitman.

Ordinance No. 28861. Gasoline filling station at 188 Chapman street. John McKinney.

Ordinance No. 28862. Fuel oil tank in front of lot 1, block 154. East Portland. Herman Enke.

Ordinance No. 28863. Gasoline filling station at 357 Burnside street. M. Rothfos.

Ordinance No. 28884. Gasoline filling station at 495 Alder street. Jos. Bergman.

Ordinance No. 28885. Gasoline filling station at 244 Second street. College Endowment Association.

Ordinance No. 28934. Gasoline filling station at 1614 East Seventeenth street. Alex. and Minnie Campbell.

Ordinance No. 28935. Gasoline filling station at 93 North Park street. D. S. Williams and Jas. Beggs.

Ordinance No. 28936. Gasoline filling station at 67 Sixth street. Corbett estate.

Ordinance No. 28937. Gasoline filling station at 755 Belmont street. Bella P. Dailey.

Ordinance No. 28938. Gasoline filling station at southeast corner of Fourteenth and Burnside streets. Paul Van Fridagh.

Ordinance No. 28939. Gasoline filling station at 335 Burnside street. John and Jos. Matschiner.

Ordinance No. 28968. Gasoline filling station at 10 Broadway. C. A. Malarkey.

Ordinance No. 28969. Gasoline filling station at 1043 Williams avenue. Lumsden Estate.

Ordinance No. 28976. Fuel oil tank at northwest corner East Water and East Madison streets. S. P. & S. Ry Co.

Ordinance No. 29009. Gasoline filling station at 103 East Water street. Ladd Estate Co.

Ordinance No. 29073. Gasoline filling station at southeast corner Knott street and Williams avenue. T. W. B. London.

Ordinance No. 29074. Gasoline filling station at 993 Belmont street. W. M. Bradford.

Ordinance No. 29075. Gasoline filling station at northwest corner of East Stark and East Twenty-ninth streets. W. B. Smith.

Ordinance No. 29110. Gasoline filling station at 335 North Seventeenth street. Ned Munger.

Ordinance No. 29101. Fuel oil tank at 145 Monroe street. Mrs. W. A. Thompson.

Ordinance No. 29127. Gasoline filling station at 42 Third street. R. R. Thompson Estate.

Ordinance No. 29128. Gasoline filling station at 209 Front street. Fletcher Linn.

Ordinance No. 29129. Fuel oil tank at northeast corner of East Thirty-seventh and East Market streets. Mrs. Burdette.

Ordinance No. 29156. Fuel oil tank at northeast corner of East Fifty-fourth street and Sandy Boulevard. Sisters of the Holy Child.

Ordinance No. 29157. Fuel oil tank at 1092½ Hawthorne avenue. Rudolph Christman.

Ordinance No. 29212. Gasoline filling station at 361 East Eleventh street. I. F. Beales.

Ordinance No. 29213. Gasoline filling station at southeast corner of East Tenth street and East Burnside street. D. C. Powell.

Ordinance No. 29214. Gasoline filling station at 340 Oregon street. Thomas Farrell.

Ordinance No. 29215. Gasoline filling station at 429 Belmont street. Jessie B. Dawley.

Ordinance No. 29216. Gasoline filling station at southeast corner of Willamette Boulevard and Gay street. Peter Schnell.

Ordinance No. 29217. Fuel oil tank at northeast corner of Nineteenth and Lovejoy streets. Royal Arms Co.

Ordinance No. 29236. Fuel oil tank at southeast corner of First and Main streets. Jos. Clossett.

Ordinance No. 29237. Gasoline filling station at 1733 Derby street. Huesner and Heisler.

Ordinance No. 29241. Fuel oil tank at southeast corner of Nineteenth and Marshall streets. Jos. Simon.

Ordinance No. 29242. Fuel oil tank at southeast corner of Ninth and Flanders streets. City Laundry Co.

Ordinance No. 29243. Gasoline filling station at 1254 Belmont street. Mike Arndt.

Ordinance No. 29244. Gasoline filling station at 506 Williams avenue. J. Johnston.

Ordinance No. 29248. Gasoline filling station at 209 Fourth street. H. J. Morrison.

Ordinance No. 29249. Gasoline filling station at 269 Sixteenth street. John H. Montgomery.

Ordinance No. 29266. Gasoline filling station at 266 Eleventh street. W. S. Biddle.

Ordinance No. 29301. Gasoline filling station at 434 Alder street D. P. Thompson Estate Co.

Ordinance No. 29327. Fuel oil tank at northwest corner of East Twenty-fourth street and Sandy Boulevard. E. M. Rasmussen & Son, Inc.

Ordinance No. 29328. Gasoline filling station at 409 Williams avenue. E. V. Berwick.

Ordinance No. 29413. Fuel oil tank at 262 Park street. M. and A. Shogren.

Ordinance No. 29414. Fuel oil tank at northwest corner of Twentieth and Marshall streets. Mary E. Couch.

Ordinance No. 29415. Fuel oil tank at 429 Harrison street. H. D. Triplett.

Ordinance No. 29480. Gasoline filling station at 1372 Division street. C. W. Eiler.

Ordinance No. 29652. Gasoline filling station in front of lot 5, block 7, Etna Addition. Thomas Edwards.

Ordinance No. 29592. Fuel oil tank at 250 Twelfth street. I. L. Harper.

Ordinance No. 29593. Fuel oil tank at 273 Salmon street. A. & C. Feldenheimer.

Ordinance No. 29630. Fuel oil tank at 656 Flanders street. O. J. Sherman.

Ordinance No. 29631. Fuel oil tank at Imperial Heights. H. L. Pittock.

Ordinance No. 29658. Fuel oil tank at 91 East Fourteenth street. School District No. 1.

Ordinance No. 29659. Fuel oil tank at 561 East Alder street. School District No. 1.

Ordinance No. 29660. Fuel oil tank at 1040 East Ankeny street. H. R. Albee.

Ordinance No. 29661. Fuel oil tank at 26½ Twentieth street North. Clara N. Hall.

Ordinance No. 29662. Fuel oil tank at 925 The Crescent. H. J. & L. D. Murphy.

Ordinance No. 29663. Fuel oil tank at 281 East Salmon street. Security Savings & Trust Co.

Ordinance No. 29664. Fuel oil tank at 291 East Salmon street. Security Savings & Trust Co.

Ordinance No. 29665. Fuel oil tank at 278 East Salmon street. Columbia Contract Co.

Ordinance No. 29666. Gasoline filling station at 754 East Morrison street. Bella P. Dailey.

Ordinance No. 29696. Gasoline filling station at 552 Union avenue North. B. Ehlinger.

Ordinance No. 29697. Gasoline filling station at 369 Hawthorne avenue. Ambrose Scott.

Ordinance No. 29699. Gasoline filling station at southeast corner of East Twelfth and East Burnside streets. Adolph A. Dekum.

GASOLINE STORAGE

Distillate Storage tank and filling pump at 327 Ankeny street, between Sixth street and Broadway; Wilder Bros.

Gasoline storage tank and filling pump at 668 Milwaukie street, between Frederick and Karl streets; F. G. Urfer.

Gasoline filling pump at 1220 Willamette Boulevard, between Wall street and Macrum street; Peninsular Lumber Co.

Gasoline filling pump at 369 Hawthorne avenue, between Third street and Union avenue; The Scott Co.

Gasoline and distillate storage tanks and filling pumps at 410 Stark street; Title & Trust Company, receiver.

Gasoline storage tank and filling station at 817 Williams avenue; James L. Kelly.

Gasoline storage tank and filling station at 351 First street, between Market and Mill streets; Reed Institute.

Gasoline filling pump and storage tank at 712 Williams avenue, between Cook avenue and Ivy street; John M. Pittenger.

Gasoline storage tank and pump at 84 and 86 Broadway, between Everett street and Flanders street; Stanley S. Thompson.

Gasoline storage tank and pump at 1258 Belmont street, between East Forty-second street and East Forty-third street; Ottilie Arndt.

Gasoline filling station at 863 Union avenue, between Mason street and Shaver street; Miller Wood Company.

Gasoline filling pump and tank at 1403 Columbia boulevard, between Fessenden and Gilbert streets; M. L. Holbrook.

Gasoline filling pump and storage tank, No. 2209 East Glisan street, between East Eighty-ninth and East Ninety-first streets; H. S. Amos.

Gasoline filling pump at 188 and 190 Chapman street, between Yamhill and Taylor streets; John McKinney.

Gasoline storage tank and filling pump on Thurman street, between Twenty-seventh and twenty-eighth streets; Beno & Ballis.

Gasoline storage tank and filling pump at 328 Pine street, between Sixth and Broadway; Corbett Estate.

Gasoline storage tank and pump at 329 Front street, between Clay and Market streets; Mrs. Yetta Cohn.

Gasoline filling station at 34 Third street, between Ash and Ankeny streets; Fred Bickel.

Gasoline storage tank and filling pump at 52 and 54 Sixth street, between Pine and Ankeny streets; Russel & Blythe.

Gasoline storage tank and filling pump at 14 North Broadway, between Ankeny and Burnside streets; C. A. Malarkey & Son.

Gasoline storage Tank at 188-190 Chapman street, between Yamhill and Taylor street; John McKinney.

Gasoline storage tank and filling pump at 840 Sandy boulevard; J. Legler.

Gasoline filling tank and filling pump at 1372 Division street; C. A. Rusco.

Gasoline filling station and storage tank at 109 Eleventh street, between Washington and Stark streets; S. M. Cohn Real Estate Investment Company.

Gasoline storage tank and gasoline pump on Oak street, between Park and West Park streets; Jas. T. Barron.

Gasoline storage tank and pump at 1415 Sandy boulevard, between East Fifty-first and East Fifty-second streets; V. A. Crum.

Gasoline storage tank and pump at 108 Second street, between Washington and Stark streets; Labbe Bros.

Gasoline filling station at 1883 East Glisan street, between East Seventy-fourth and East Seventy-fifth streets; Jessie E. Baughman.

Gasoline filling station at 72 Sixth street, between Pine and Oak streets; Blythe & Russell.

Gasoline filling station at 1854 Fremont street, between East Seventy-first and East Seventy-second streets; Edwards & Taff.

Gasoline storage tank and pump at 639 Union avenue, between Ivy street and Cook avenue; W. W. Graybeal.

Gasoline filling pump at 707 Belmont street, between East Twentieth and East Twenty-first streets; B. T. Miller.

Gasoline tank and filling station at 1440 East Stark street, between East Fifty-second and East Fifty-third streets; O. C. Bell.

Gasoline storage tank and pump at 414 Stark street; The Title & Trust Company, receiver.

Gasoline filling pump at 993 Belmont street, between East Thirty-third and East Thirty-fourth streets; Wm. Bradford.

Distillate storage tank and gasoline filling pump at 482 Williams avenue, between Page and Eugene streets; Gus H. Hinnenkamp.

Gasoline filling pump at 482 Williams avenue, between Page and Eugene streets; Gus H. Hinnenkamp.

Distillate filling pump on East Seventeenth street, between East Ash and East Pine streets; W. Nicholson.

Gasoline filling pump on Broadway, between Couch and Davis streets; Labbe Bros.

Gasoline filling pump at 444 Belmont street, between East Seventh and East Eighth streets; J. H. Johnson.

Gasoline filling pump and distillate filling pump at 839 Union avenue, between Failing and Shaver streets; Lizzie Swetland.

Gasoline filling station at 209 Union avenue, between Holladay avenue and Oregon street; O. W. West.

Gasoline filling pump at 102 N. Jersey street, between Burlington and Chicago streets; Henry Bickner.

Gasoline filling pump at 363 East Eleventh street, between East Stephens and East Harrison streets; I. F. Beals.

Distillate storage tank at 1637 Macadam road, between Virginia and Miles streets; B. M. Lombard.

Gasoline storage tank on S. W. corner of Wasco street and Union avenue; R. B. Loyd.

Gasoline storage tank at 25 North Broadway, between Burnside and Couch streets; H. L. Keats Auto Company.

Gasoline storage tank at Stockdale on Linnton road; Oregon Cooperage Company.

Gasoline storage tank at 276 Taylor street; Sol Bloom.

Gasoline storage tank at 369 Hawthorne avenue; T. L. Scott Co.

Gasoline storage tank at 388 Couch street; S. Lowengart Estate.

Gasoline storage tank at 2026 East Stark street, corner of East Eighty-first street; N. L. Ackles.

Gasoline storage tank at 375 Weidler street; Chas. M. Nelson.

Gasoline storage tank at 215 Sixteenth street; J. Kamm Estate.

Gasoline tanks, Albina Shop Yards; Oregon-Washington Railroad & Navigation Company.

Gasoline storage tank at 2049 East Eighty-second street; Francis E. Stantrope.

Gasoline storage tank at 812 Corbett street, between Whitaker and Gibbs streets; Susie Widness.

Gasoline storage tank at 121 Third street, between Glisan and Hoyt streets; Pelton Estate.

Gasoline storage tank at 103 West Richmond street, between Jersey and Ivanhoe streets; Peterson & Lindsay.

Gasoline storage tank at 14 East Third street, between East Ash and East Ankeny streets

Gasoline storage tank at 749 First street; Sidney Wallace.

Gasoline storage tank at 774 Sandy boulevard, between East Twenty-second and East Twenty-fourth streets; Chas. H. Fox.

Gasoline storage tank at northeast corner of Davis street and Broadway, between Sixth street and Broadway; Mary T. O'Brien Estate.

Storage tank for distillate at East Second street and East Yamhill street, between East First and East Second streets; M. B. Wakman.

Gasoline storage tank at 553 Jefferson street, between Seventeenth and Chapman streets; Bridget Frainey.

Benzol storage tank at 315 East Main street, between East Water and East First streets; Standard Oil Company.

Distillate storage tank at 634 East Ash street, between East Seventeenth and East Eighteenth streets; Mr. Nicholson.

Distillate storage tank on Broadway, between Couch and Davis street; Labbe Bros.

Gasoline storage tank at 150 Page street, between Borthwick and Ross streets; E. H. Ingham.

Gasoline storage tank at 61 Union avenue, between East Everett and East Davis streets; J. F. Kerrigan.

Gasoline storage tank at 102 North Jersey street; Henry Buckner.

FUEL OIL TANKS

Fuel storage oil tank on Glisan street, between Twenty-third and Twenty-fourth streets; H. O. Triplett.

Fuel oil tank at northwest corner of Twelfth and Flanders streets; Northwestern Electric Company.

Fuel oil tank at 466 East Thirteenth street; T. A. Sutherland.

Fuel oil tank at 405 East Alder street; Citizens Bank.

Fuel oil tank at 104-106 North Fourth street; Mrs. H. Trenkman.

Storage tank for fuel oil at 255 Thirteenth street; Portland Social Turn Verein.

Fuel oil tank on Marshall street, between Nineteenth and Twentieth streets; Dr. R. C. Coffey.

Fuel oil tank at 27 East Third street, between East Burnside and East Couch streets; Mrs. Minnie G. Tobey.

Fuel oil storage tank at 24 North Third street; Fred Fritz.

Fuel oil tank at 321 East Yamhill street, between East First and East Second streets; Spokane, Portland & Seattle Ry. Co.

Fuel oil storage tank at 467 Thompson street; W. P. Dickey.

Crude oil tank at 122 North Fifth street; Pioneer Trust Company.

Crude oil storage tank on Twelfth street, between Taylor and Yamhill streets; First M. E. Church.

Crude oil storage tank on Belmont street, between Union avenue and Grand avenue; J. G. Edwards.

Crude oil storage tank at 34 Fifteenth street North, between Burnside and Couch streets; M. Lawler.

Crude oil storage tank at Ninth street, between Couch and Davis streets; L. and H. S. Freedman.

WAGON SCALE

Ordinance No. 9504. Wagon scale on Main street, in front of lot 1, block 7, Portland. Thos. Schneider.

Ordinance No. 16782. Wagon scale on East Washington street in front of lot 4, block 42, East Portland. Pearson-Page Co.

Ordinance No. 17111. Wagon scale on east side of East Sixth street, 30 feet south of Hawthorne avenue. Long and Kitching.

Ordinance No. 19893. Wagon scale—move from 312 Hoyt street to 310 Hoyt street. Oregon Transfer Co.

Ordinance No. 20145. Street scale in front of 128-130 Union avenue. Andrews & Son.

Ordinance No. 21722. Wagon scale in front of 55 Nesmith street, Albina. Edlefsen Fuel Co.

Ordinance No. 22364. Street scale in east side of Borthwick street, between Page and Russell streets. George and Shannon.

Ordinance No. 23544. Street scale on north side East Washington street, between East Second street and East Third street. G. W. Simpson.

Ordinance No. 23795. Street scale on west side of Front street, under Broadway bridge. Albers Bros. Milling Co.

Ordinance No. 24100. Street scale on west side of Union avenue, 80 feet south of East Mill street. Phoenix Iron Works.

Ordinance No. 25155. Wagon scale on south side of East Ash street, in front of lot 3, block 5, Frush's Square. Owner.

Ordinance No. 27591. Wagon scale in front of lot 5, block 192, East Portland. Star Sand Co.

Ordinance No. 27689. Wagon scale at 374 Front street. Ingham & Cogswell.

Ordinance No. 28016. Wagon scale in front of lot 5, block 15, East Portland. Edlefsen Fuel Co.

Ordinance No. 28654. Wagon scale at south side of East Alder street, between East First street and East Second street. Pearson Page Co.

Ordinance No. 28672. Track scale on west side of Macadam street between Lane street and Gaines street. Fisher, Thorsen & Co.

Ordinance No. 30631. Wagon scale on north side of Goldsmith street, between Delay street and Mississippi avenue. Star Sand Co.

Ordinance No. 31849. Wagon scale at Thirteenth and Pettygrove streets; Willamette Fuel & Supply Company.

STREET CLOCKS

Ordinance No. 9810. Clock, northwest corner of Third and Washington streets. Albert Feldenheimer.

Ordinance No. 13452. Clock on Third street in front of Mohawk building. Butterfield Bros.

Ordinance No. 19744. Clock in front of 268 Washington street. F. Friedlander.

Ordinance No. 19979. Clock at 149 Third street. I. Holsman.

Ordinance No. 20306. Clock at 548 Williams avenue. Hamilton Jewelry Co.

Ordinance No. 20463. Clock at 40 Third street. Holzman Bros.

Ordinance No. 21819. Clock at 283 Morrison street. Marx & Bloch.

Ordinance No. 22295. Clock at 324 Washington street. A. & M. Delovage.

Ordinance No. 23139. Clock at 1144 Albina avenue. Dillen Rogers.

Ordinance No. 23549. Remove clock from 286 Morrison street to 130 Fifth street. G. Heitkemper Co.

Ordinance No. 23787. Clock on north side of Washington street, near Sixth street. Holzman Bros.

Ordinance No. 24006. Clock in front of 225 First street. A. E. Hurwitz.

Ordinance No. 25011. Remove clock from 284 Washington street to 386 Washington street. L. C. Henrichsen Co.

rdinance No. 26575. Street clock at 162 First street. Isaac E. Staples.

Ordinance No. 27226. Street clock on south side of Washington street, 20 feet south of Broadway. I. Aronson.

Ordinance No. 27882. Move street clock from 403 East Morrison to 105 Grand avenue. A. E. Burke.

Ordinance No. 27923. Public clock at 121 Third street O. Korber.

Ordinance No. 28030. Street clock at 254 Alder. Lindquist & Nelson.

Ordinance No. 28115. Move street clock from 285 Washington street to corner of Washington and Park streets. A. & C. Feldenheimer.

Ordinance No. 28158. Street clock at 268 Washington street. Leffert Jewelry Co.

Ordinance No. 28656. Street clock at 373 East Burnside street. Rogers Bros.

Ordinance No. 30216. Clock at 141 A Broadway. Herman J. Altstock.

Ordinance No. 30255. Clock at 387 Alder street. H. I. Mendelsohn.

Ordinance No. 30386. Clock at 240 Alder street. Roy & Molin.

Ordinance No. 30812. Clock at 1651 E. Thirteenth street. Fallis & Matthews.

Ordinance No. 32118. Clock at 315 Washington street. Davids Jewelers, Inc.

Ordinance No. 32246. Clock at 522 Williams avenue; Rodney Estate.

Ordinance No. 32227. Clock at 343 Washington street; Davids Jewelers.

Ordinance No. 32118. Clock at 294 Washington street; I. Holsman.

Ordinance No. 26575. Clock at 266 Morrison street; I. E. Staples.

Ordinance No. 31575. Clock at 334 Washington street; Felix Bloch.

Ordinance No. 31702. Clock at 325 Washington street; H. I. Mendelson.

SIGNS—ILLUMINATED

Ordinance No. 15324. Illuminated sign at 109 Sixth street. Fred Fritz.

Ordinance No. 22050. Permission to move electric signs from Third and Yamhill streets to Eleventh and Morrison streets. George L. Baker.

Ordinance No. 22617. Electric sign at First and Washington streets. Apollo Roller Skating Rink Co.

Ordinance No. 23230. Electric sign across Burnside street, between Second and Third streets. Fritz & Russell.

Ordinance No. 24245. Electric sign across Alder street at West Park street. Peoples Amusement Co.

Ordinance No. 24499. Two electric signs across Third street and Fourth street. Philip Gevurtz.

Ordinance No. 25411. Electric sign across Alder street at First street. Portland Railway, Light & Power Co.

Ordinance No. 25653. Electric sign across Washington street, between Tenth and Eleventh streets. Globe Theatre Co.

Ordinance No. 26216. Electric sign on east side of Fifth street, south of Oak street. Kilham Stationery and Printing Co.

Ordinance No. 26494. Electric sign across Seventh street. Orpheum Theatre.

Ordinance No. 26675. Electric sign across Seventh street at Oak street. Wright-Dickinson Hotel Co.

Ordinance No. 26728. Electric sign across Sixth street, between Stark and Washington streets. Columbia Theatre Co.

Ordinance No. 26729. Electric sign across Seventh street and Park street. Empress Theatre.

Ordinance No. 26797. Remove electric sign from 111 Third street to southwest corner of Sixth and Washington streets. Brasfield & Porges.

Ordinance No. 29443. Electric sign across Washington street at Fourth street. Lyric Theatre Co.

SIGNS

Ordinance No. 22046. Metallic sign in front of 30-32 North Fifth street. The Rosenfeld-Smith Co.

Ordinance No. 24007. Signs marking Pacific Highway on certain streets. Pacific Highway Association.

Ordinance No. 26251. Signs on telephone poles. Library Association of Portland.

Ordinance No. 26827. Two post signs. Portland Fruit and Flower Mission.

Ordinance No. 30758. Electric sign at northwest corner of Broadway and Yamhill streets. Orpheum Theatre.

Ordinance No. 31778. Light sign at Broadway and Stark street; Turner & Dahnken.

Ordinance No. 32142. Electric sign across Broadway, near Taylor; Orpheum Theatre & Realty Company.

Ordinance No. 31703. Electric light sign at corner of Broadway and Yamhill streets; Hippodrome.

Ordinance No. 32252. Signs and danger signals in East Eighty-second, Halsey, East Fifty-second, East Fifty-third, East Forty-seventh, East Fifty-fifth and East Sixtieth streets; O-W. R. & N. Company.

SIGN PERMITS
GRANTED UNDER PROVISIONS OF ORDINANCES 27662 AND 27933

Location	Date	Granted to
269 Crosby St.	12-18-13	Wurtenberger & Heinrich
200 Morrison St.	12-19-13	J. A. Clemenson Drug Co.
340 Morrison St.	12-19-13	The Wiley B Allen Co.
124 Russell St.	12-19-13	H. H. Heide
332 Washington St.	12-20-13	J. H. Leighton
61 N. 14th St	12-20-13	Howard Automobile Co.
740 Union Ave. N.	12-20-13	Henry Maier
132 Fourth St.	12-22-13	The Louvre
205 First St.	12-22-13	Lankin & Wildi.
56 N. Fourth St.	12-22-13	Tom K. Tanaka
4638 67th St. S. E.	12-22-13	A. Bonellis
268 Russell St.	12-22-13	Earl F. Hall
346½ Morrison St.	12-22-13	W. E. Songer
729 Williams Ave.	12-22-13	Sam and Bert West
164 Second St.	12-22-13	L. T. Outhier
263 First St.	12-22-13	Kamusher & Nudelman
523 Union Ave. N.	12-23-13	Donohue & Wagnitz
93½ Sixth St.	12-23-13	Chan Hi
212 Yamhill St.	12-23-13	Athos & Claude Ciattino
348 Morrison St.	12-23-13	W. H. Hamilton
124 Union Ave.	12-23-13	Accommodation Bag. & Tr. Co.
686½ Lombard St.	12-23-13	Peninsula Lodge, 128, I. O. O. F.
28½ N. Third St.	12-23-13	B. C. Larson
410 Stark St.	12-23-13	Schubert Bros.
210 Morrison St.	12-23-13	Gerspach & Stroup
652½ Alberta St.	12-23-13	Alberta Lodge 233, I. O. O. F.
167 Third St.	12-23-13	F. W. Winter
107½ Sixth St.	12-23-13	Hong Kong Cafe
107½ Sixth St.	12-23-13	Hong Kong Cafe
347½ Morrison St.	12-23-13	New Republic Grill
347½ Morrison St.	12-23-13	New Republic Grill
347½ Morrison St.	12-23-13	New Republic Grill
167 Broadway	12-23-13	Chambers & Son
567 Washington St.	12-24-13	Bert E. Allen
314 Second St.	12-24-13	Al Seguin
107½ Fourth St.	12-24-13	Ola J. Sharp
109 Broadway	12-24-13	Wyckoff & Butler
82½ Sixth St.	12-24-13	E. C. Ball
275 Third St.	12-24-13	Martin Denny
227 First St.	12-26-13	Joe Sigrist
106 Grand Ave.	12-26-13	Strowbridge Hdwe. & Pt. Co.
128 6th and 311 Alder St.	12-26-13	Hof Brau—Quelle
441 Washington St.	12-26-13	Julius P. Levy
1693 E. 13th St.	12-26-13	L. Charack
49 N. Third St.	12-26-13	Splidsboel & Nelson
311 Alder St.	12-26-13	Hof Brau—Quelle
108 Nelson St.	12-26-13	A. Brugger
233 Burnside St.	12-26-13	A. Clark
639 Washington St.	12-27-13	Geo. Moulton
126 Broadway	12-27-13	Western Union Tel. Co.
266½ Front St.	12-29-13	T. Sumida
326 Alder St.	12-29-13	Gemose & Ellis
247 Alder St.	12-29-13	Holden & Schlickeiser
68½ N. Sixth St.	12-30-13	H. B. Roberts (Jack. 10c Store)
287 Alder St.	12-30-13	Alder Hotel Co.
187 Fourth St.	12-30-13	Ham Bros.
292 Burnside St.	12-30-13	Wm. Schmidt
29 W. Fourth St.	12-30-13	M. Kawata
6½ N. Third St.	12-30-13	Anton Canduyler
246½ Yamhill St.	1- 6-14	Hotel D'Moy
253½ Washington St.	1-12-14	American Sign Co.
400 Hawthorne Ave.	1-29-14	American Sign Co.
385 E. Morrison St.	1-29-14	American Sign Co.
72 and 74 Fifth St.	1-29-14	American Sign Co.
350 Morrison St.	2- 5-14	W. D. Fraley
174 Fourth St.	2-10-14	C. E. Obrist
210 First St.	2-13-14	Globe Liquor Co.

SIGN PERMITS—Continued

Location	Date	Granted to
127 Broadway	2-18-14	Postal Telegraph Co.
49 Third St	2-20-14	American Lens Sign Co.
293 Morrison St	2-21-14	American Sign Co.
128½ Broadway	2-24-14	American Sign Co.
283 Washington St	3-26-14	Portland Sign Co.
810 East Broadway	3-26-14	American Lens Sign Co.
Forty-second and Sandy Road	3-26-14	Portland Sign Co.
127 Eleventh St	3-26-14	Portland Sign Co.
Eleventh and Alder Sts	3-26-14	Portland Sign Co.
350 Alder St	4- 1-14	Hyatt Talking Machine Co.
348 Alder St	4- 8-14	Lang & Krause
191 Morrison St	4-14-14	American Lens Sign Co.
265 Morrison St	4-15-14	Boardman & Burgoal
107 Third St	4-20-14	Ry. Exchange Bldg.
48 N. Second St	4-21-14	Portland Sign Co.
Fourth and Morrison Sts		R. M. Gray
75 N. Third St	4-29-14	Portland Sign Co.
147 Third St	4-29-14	Portland Sign Co.
143 Broadway	5- 4-14	American Sign Co.
148 Park St	5- 4-14	Portland Sign Co.
146 Sixth St	5- 4-14	Columbia Optical Co.
161 Third St	4- 9-14	Brownsville Woolen Mills
231½ Morrison St	5-11-14	Meek Sign Co.
69 N. Tenth St	5-12-14	Wm. Schmidt
86 Tenth St	5-13-14	Portland Sign Co.
Tenth and Burnside Sts	5-14-14	Indian Grille
66¾ Sixth St	5-14-14	C. H. Green
Broadway and Everett Sts	5-16-14	Portland Sign Co.
1320 Sandy Blvd	5-16-14	American Lens Sign Co.
Sixth and Washington Sts	5-16-14	American Lens Sign Co.
113 N. Sixth St	5-18-14	Peter Lamkes

SIGN PERMITS—Continued

GRANTED UNDER PROVISIONS OF ORDINANCE 28959

Location	Date	Granted to
428 Washington St	5-25-14	Gately's Credit Clothing Co
108 Third St	6- 3-14	Nichol the Tailor
309 Burnside St	6- 3-14	Gus Petropolus
270 Burnside St	6- 3-14	Mike Dowgiallo
16 North Fourth St	6- 3-14	Mike Dowgiallo
124½ Fourth St	6- 9-14	Montgomery & Lumadue
West Park and Alder Sts	6-15-14	Woodard, Clarke & Co.
537 Union Ave	6-23-14	N. W. Hart
148 Broadway	7- 2-14	Weber Sign Co.
Foster Rd., bet. E. Main & Marion	7- 6-14	H. H. Spring
109 Eleventh St	7-31-14	Butterworth-St. Helen Co.
226 Pine St	8- 4-14	Weber Sign Co.
537 Union Ave	8-14-14	American Lens Sign Co.
144 Fourth St	8-14-14	American Lens Sign Co.
74 Third St	8-14-14	American Lens Sign Co.
92 N. Third St	8-14-14	American Lens Sign Co.
Fourth and Burnside Sts	8-24-14	American Lens Sign Co.
Second and Couch Sts	9-15-14	American Lens Sign Co.
Couch, bet. Second and Third	9-15-14	American Lens Sign Co.
322½ Williams Ave	9-15-14	Theodore Rieger
241 Couch St	9-16-14	Stasewich & Galash
Fourth, bet. Washington & Alder	9-17-14	M. H. McMahon
280 Morrison St	10-13-14	Portland Sign Co.
Sixth and Burnside Sts	10-13-14	Elephant Pharmacy
Broadway, bet. Stark and Wash	10-14-14	Orpheum Theatre
126 Broadway	10-15-14	Meek Sign Co.
117 Main St	10-15-14	Theckla Bright
Stark and West Park Sts	10-17-14	American Lens Sign Co.

SIGN PERMITS—Continued

Location	Date	Granted to
291½ Tenth St	10-26-14	Puritan Delicatessen
552 Union Ave	10-27-14	J. H. Fenton
Twelfth and Washington Sts	10-27-14	Nortonia Hotel Co.
West Park and Washington Sts	10-27-14	Bushnell's Studio.
151 Fourth St	11- 4-14	Portland Sign Co.
530 Mississippi Ave	11-12-14	Wray & Wray
246 Burnside St	11-14-14	American Lens Sign Co.
Sixth, bet Alder and Morrison Sts.	11-19-14	Portland Sign Co.
Second, bet. Burnside and Couch.	11-19-14	Portland Sign Co.
80 Third St	11-19-14	Portland Sign Co.
Park, bet. Stark and Washington	11-27-14	Portland Sign Co.
West Park, bet. Stark and Wash.	11-27-14	Portland Sign Co.
60th Ave., bet. 82nd & 10th Aves.	11-28-14	W. S. Bennett
349 Washington St	11-28-14	American Lens Sign Co.
126 Fourth St	11-28-14	American Lens Sign Co.

SIGN PERMITS—Continued

GRANTED UNDER PROVISIONS OF ORDINANCES NO. 28959 AND NO. 30332

Location	Date	Granted to
336 Broadway	12-3-14	Waldorf Barber Shop
101 Fourth St	12-10-14	Portland Sign Co.
165 Fourth St	12-28-14	Geo. L. Boynton
141 Broadway	1- 7-15	Weber Sign Co.
389 Washington St	1- 8-15	NePage & McKenney
381 Washington St	1- 8-15	NePage & McKenney.
331 Oak St	1- 9-15	Zancher Co.
62 Third St	1-18-15	Portland Sign Co.
245 Davis St	1- 18-15	Portland Sign Co.
62 Third St	1- 18-15	Portland Sign Co.
293 Grand Ave	1- 20-15	Main Electric Co.
147½ N. Sixth St	1- 21-15	Bang's Restaurant
245 Stark St	1- 28-15	Weber Sign Co.
185 Third St	2- 3-15	Main Electric Co.
409 Washington St	2- 3-15	Portland Sign Co.
1090 Belmont St	2- 8-15	Main Electric Co.
311 Washington St	2- 8-15	Portland Sign Co.
103 Sixth St	2-13-15	Gus Petroplus
204½ Washington St	2-13-15	Portland Sign Co.
243 Davis St	2-13-15	Portland Sign Co.
243 Davis St	2-13-15	Portland Sign Co.
367 Washington St	2-13-15	Portland Sign Co.
106 N. Main St. (Lents)	2-15-15	Benge & Bell
4515 Sixty-fifty St. S. E.	2-19-15	Arleta Bldg. Association
209 Morrison St	2-20-15	McDonald & Powell
64 Sixth St	2-24-15	Betty Olofson
SE corner Morrison and W. Park.	2-24-15	Central Drug Co.
Fourth, bet. Morrison and Alder.	2-25-15	Goodyear Shoe Co.
NW cor. Fifth and Washington	2-25-15	Henry Jenning & Sons.
5 N. Sixth St	2-25-15	I. B. Sturges
342 Alder St	3- 6-15	Main Electric Co.
130 Broadway	3- 8-15	Portland Sign Co.
140 Third St	4-12-15	Wonder Clothes Shop
West Park, bet. Washington and Alder Sts	3-15-15	Portland Sign Co.
NE cor. Fourth and Alder Sts	3-24-15	Portland Sign Co.
SE cor. Fourth and Stark Sts	3-24-15	Portland Sign Co.
324 Alder St	3-24-15	Multnomah Display
230 Washington St	3-27-15	Multnomah Display
134 Fourth St	3-27-15	Weber Sign Co.
269 Washington St	4- 2-15	Weber Sign Co.

SIGN PERMITS—Continued

Location	Date	Granted to
322 Washington St	4-12-15	Portland Sign Co.
110 N. Sixth St	4-13-15	Portland Sign Co.
362½ Alder St	4-15-15	Metropole Hotel
235 Morison St	4-19-15	Multnomah Display
275 Morrison St	4-19-15	Multnomah Display
249 Stark St	5-13-15	Weber Sign Co.
678 E. Broadway	5-13-15	The Sugar Bowl
327 Stark St	5-13-15	A. L. McDonald
413 Burnside St	5-26-15	Hotel Canadian
Washington St., bet. West Park and Tenth Sts	5-27-15	NePage & McKenney Co.
SE cor. Washington and Broadway	6- 4-15	M. A. Gunst & Co.
NE cor. Fifth and Morrison Sts	6- 4-15	M. A. Gunst & Co.
273 Grand Ave	6- 8-15	Main Electric Co.
SE cor. Sixth and Washington	7- 1-15	M. A. Gunst & Co.
SW cor. Third and Alder Sts	7- 1-15	M. A. Gunst & Co.
NW cor. Fourth and Washingon	7- 1-15	M. A. Gunst & Co.
360 Alder St	7- 8-15	Multnomah Display
103 Broadway	7-12-15	Portland Sign Co.
220 Morrison St	7-16-15	United Drug Store
185 First St	7-16-15	Gevurtz Furniture Co.
321 Washington St	7-23-15	Allen & Lewis
396 E. Clay St	7-24-15	N. F. Noren
206 Couch St	7-24-15	Henry Martyoff
216 Morrison St	7-31-15	C. E. Obrist
321 Washington St	7-31-15	Advance Sign Co.
Roof of Meier & Frank Bldg	8- 2-15	Portland Sign Co.
343 Washington St	8- 2-15	Portland Sign Co.
103 Broadway	8- 2-15	Portland Sign Co.
325 Alder St	8- 2-15	E. H. Holt.
266 Morrison St	8-13-15	Western Electric Works
322½ Stark St	8-18-15	Weber Sign Co.
165 First St	8-18-15	Weber Sign Co.
272 Washington St	9- 2-15	United Clothes Shop
328 E. Morrison St	9-13-15	Rose City Athletic Club
130 Third St	9-15-15	Portland Sign Co.
160 Fourth St	9-15-15	Portland Sign Co.
91 Sixth St	9-20-15	Advance Sign Co.
NE cor. Fourth and Washington	9-20-15	A. C. Hallam
SW cor. Third and Alder Sts	9-24-15	A. C. Hallam
SW cor. Sixth and Washington	9-29-15	Advance Sign Co.
N. side Alder, bet. Third and Fourth Sts	10- 1-15	Aug. Goetielman
369 and 371 E. Morrison Sts	10- 8-15	Casey House Furn. Co.
108 Broadway	10- 9-15	Portland Sign Co.
206 Broadway	10-14-15	Advance Sign Co.
1058 E. Twenty-fourth St. N	10-14-15	Beardsley & Thompson
82 Fifth St	11- 1-15	Advance Sign Co.
172½ Fourth St	11- 1-15	C. E. Obrist
65 N. Sixth St	11- 4-15	Standard Sign Co.
193 Broadway	11-10-15	W. C. Parrish
348 Morrison St	11-18-15	Andrew Kan Asiatic Imp. Co.
135 Fourth St	11-29-15	Advance Sign Co.

WALLS AND STEPS

Ordinance No. 32187. Wall and steps in Talbot road; H. S. Boone.

Ordinance No. 31805. Stone wall at East Fifty-ninth and Stanton streets; Francis M. Harvey.

Ordinance No. 31911. Walk and retaining wall at Sixth and Sheridan streets; Eliz. E. and James B. Finnigan.

Ordinance No. 31918. Wooden platform at 488 Mill streets, between Fourteenth and Sixteenth streets; Mrs. Mary J. Walter.

Ordinance No. 31918. Wooden steps at 521 Mill street, between Sixteenth and Chapman streets; G. C. and Anton Rollman.

Ordinance No. 31918. Concrete steps at 530 Mill street, between Sixteenth and Chapman streets; Wm. Pfaff.

Ordinance No. 31918. Concrete steps at 532 Mill street, between Sixteenth and Chapman streets; H. E. Wood.

Ordinance No. 32011. Concrete and stone steps on Ross street, between Dixon and Cherry streets.

Ordinance No. 31918. Concrete steps at 534 Mill street, between Sixteenth and Chapman streets; Thomas Jones.

Ordinance No. 31918. Concrete steps at 515 Mill street, between Fourteenth and Sixteenth streets; Mrs. Martha Timms.

Ordinance No. 31918. Concrete steps at 490-492 Mill street, between Fourteenth and Sixth streets; Sarah F. and E. C. Goddard.

Ordinance No. 31918. Wooden steps at 504 Mill street, between Fourteenth and Sixteenth streets; Willie L. Caples.

Ordinance No. 31918. Concrete steps and stone wall at 496-498 Mill street, between Fourteenth and Sixteenth streets; Mary L. Preston.

Ordinance No. 31918. Concrete steps at 538 Mill street, between Sixteenth and Chapman streets; Geo. Ginstin.

Ordinance No. 31918. Wooden and concrete steps at 506 Mill street, between Fourteenth and Sixteenth streets; Moy Ling.

MISCELLANEOUS

Ordinance No. 14514. Wooden cornice on building constructed on lots 5, 6, 7 and 8, block 3, Frush's Square. Owner of building.

Ordinance No. 14960. Coal shed on lot 8, block "S," Couch's Addition. W. A. Storey.

Ordinance No. 15006. Brick sidewalk in front of lots 5 and 6, block 43, Stephens Addition. A. Van Hoomisen.

Ordinance No. 15673. Steam pipe underneath street at intersection of Third and Montgomery streets. Edw. and Julia Holman.

Ordinance No. 16873. Subway across Twelfth street, between blocks 81 and 82, Couch's Addition. Henry Weinhard Estate.

Ordinance No. 17667. Exterior decoration extended 8 inches on sidewalk at northeast corner of Fifth and Washington streets. Perkins Hotel Co.

Ordinance No. 17671. Wooden passageway to connect wooden buildings on lots 1, 2, 3 and 4, block 61, East Portland (in fire limits). Nottingham & Co.

Ordinance No. 17910. Cement steps and cement walk on Marshall street, from west line of Twenty-sixth street to easterly line of Cornell street. L. Goldsmith and E. L. Lowell.

Ordinance No. 19148. Underground conduit for electric light, steam heat and power for Lewis Building, Fourth and Oak streets, to

Couch Building, 90 feet north of Washington street on Fourth street. Lewis Investment Co.

Ordinance No. 19268. Underground steam pipe from southeast corner of Fourth and Oak streets to southwest corner of Fourth and Oak streets. C. K. Henry.

Ordinance No. 19347. Bay window on wooden building at 363 Yamhill street. Mrs. P. W. Gillett.

Ordinance No. 19620. Two additional stories on Chamber of Commerce Building. Owners.

Ordinance No. 20858. Permission to change stable at northwest corner of Eleventh and Morrison streets to theater. Baker Theater Stock Co.

Ordinance No. 20991. Permission to construct wooden building on lot 2, block 8, East Portland. Atlas Mixed Mortar Co.

Ordinance No. 21613. Underground refrigerator pipe line from point 40 feet south of northeast corner block 89, Couch's Addition, to point 40 feet north of southeast corner of block 89. Swift & Co.

Ordinance No. 21621. Tunnel under Stark street, between Third and Fourth streets, for water and steam pipes. Railway Exchange Building Co.

Ordinance No. 22045. Stairway on Hall street at intersection of Heights Terrace. Jos. Jacobberger.

Ordinance No. 22254. Install heater under the sidewalk on Park street, 95 feet north of Washington street, to be used as heating plant for Star Theatre. Owner of lot 2, Park, block 1.

Ordinance No. 22436. Retaining wall and steps along First street and Lowell avenue in front of lots 1 and 2, block "B," First Street Terraces. J. B. Laber.

Ordinance No. 22543. Underground pipes and conduits for steam and hot water from lot 5, block 176, to lot 8, block 177, Portland. Imperial Hotel Co.

Ordinance No. 22856. Allowing Oregon Electric Railway Co. to use wooden poles instead of iron poles until February 13, 1912. Oregon Electric Co.

Ordinance No. 22860. Allowing Spokane, Portland & Seattle Railway Co. to erect certain buildings in its terminal yards without conforming to City Ordinances. Not good after February 13, 1912. Spokane, Portland & Seattle Railway Co.

Ordinance No. 24012. Temporary wooden auditorium building on Kamm tract. G. F. Johnson.

Ordinance No. 24093. Underground pipes across Seventh street, between Washington and Stark streets. Brooke Estate.

Ordinance No. 24183. Wooden fence 8 feet high on north side of Pettygrove street and west side of Thirteenth street. Vulcan Coal Co.

Ordinance No. 24339. Exempting block 4, Railroad Shops Addition, from provisions of Ordinance No. 23716 relating to stables.

Ordinance No. 24422. Underground steam pipe across Oak street from Wells-Fargo Building to Benson Building. Owners, Benson Building.

Ordinance No. 24650. Permitting owners of lot 3, Park block 2, to connect with sewer in Washington street. L. G. Clarke and W. F. Woodward.

Ordinance No. 24887. Public watering trough in front of lot 8, block 5, Watson's Addition. Owner.

Ordinance No. 24904. Steam pipes across Yamhill street, near Seventh street. Journal Building Co.

Ordinance No. 26304. Uncovered driveway under Broadway bridge. Albers Bros. Milling Co.

Ordinance No. 26557. Steps twenty-eight inches over property line. Vernon Presbyterian Church.

Ordinance No. 26629. Garage in Elm street, west of Montgomery Street Drive. Mrs. John Brooke.

Ordinance No. 26630. Sidewalk elevator on east side of Twelfth street, 55 feet north of Washington street. H. W. Fries.

Ordinance No. 27093. Crane on west side of Thirteenth street, between Northrup and Overton streets. Portland Iron Works.

Ordinance No. 27210. Stretch wires across Broadway, between Yamhill and Taylor streets for wireless telegraphy purposes. Y. M. C. A.

Ordinance No. 27243. Steps six inches over property line at 845 Milwaukie street. Owner.

Ordinance No. 27299. Barber pole at 1267 Macadam street. A. Margulis.

Ordinance No. 27434. Underground conduit in Marshall street, between Twenty-Second street and Twenty-third street. Board of Hospital Trustees.

Ordinance No. 27617. Gas main on Grand avenue bridge. Portland Gas & Coke Co.

Ordinance No. 27655. Steam conduit across Park street, between Washington and Alder streets. Northwestern Electric Co.

Ordinance No. 27734. Attach span wires for support of trolley wires to Fire Department building on Fourth street, between Morrison and Yamhill streets. Portland, Eugene & Eastern Railway Co.

Ordinance No. 27998. Four lamp posts on Salmon street, between Park and West Park streets for Arlington Club. Portland Railway, Light & Power Co.

Ordinance No. 28501. String electric wires across Holgate street, near East Eighteenth street. Oregon & California Railroad Co.

Ordinance No. 28502. Flume across certain timber land owned by City of Portland in Sections 30 and 31, T. 1 S., R. 5 E. W. M. Walker Creek Lumber Co.

Ordinance No. 28635. Underground steam pipe from Perkins Hotel to Swetland Building. Perkins Hotel Co.

Ordinance No. 28642. Blasting, Westover Terraces. Lewis-Wiley Hydraulic Co.

Ordinance No. 28702. Enclose with board fence certain blocks and intervening streets in University Park.. Marion Erceg.

Ordinance No. 28813. Temporary freight depot on block 86, East Portland. Spokane, Portland & Seattle Railway Co.

Ordinance No. 28840. Suspended pneumatic tubes across Fifth street, between Alder and Morrison streets. Meier & Frank Co.

Ordinance No. 28898. Ornamental arches and lights on Third street, between Yamhill and Glisan streets. Owners and Tenants.

Ordinance No. 29076. Exempting First M. E. Church at Twelfth and Taylor streets from provisions of Ordinance No. 21455 till July 1, 1916, under certain conditions.

Ordinance No. 29363. Overhead sawdust conveyer across foot of Spokane avenue. East Side Mill & Lumber Co.

Ordinance No. 29438. Exempting buildings at 311 and 311½ Burnside street from provisions of Ordinance No. 21455 until January 1, 1915. Andrew C. Smith.

Ordinance No. 29597. Bracket lights on Fourth street, from Jefferson street to Burnside street for five years. Owners and Tenants.

Ordinance No. 29757. Seven ornamental iron lamp posts in Georgian Court. F. W. Hild.

Ordinance No. 29758. Underground conduit across Oak street, between Broadway and Park street, for steam pipes and electric wires. Benson Hotel Co.

Ordinance No. 29850. Drill well on south side of Marshall street, 130 feet west of Twentieth street. Portland Electric Ice Co.

Ordinance No. 25570. Ellis bumping post on Fourth street, 20 feet north of Glisan street. Union Meat Co.

May 3, 1905. Dry kiln in East Twenty-eighth street, in Sullivan's Gulch. Doernbecher Mfg. Co.

Ordinance No. 30054. Street light standard in front of 127 Grand avenue. O. W. West.

Ordinance No. 30208. Erect bracket light on Pittock block. Northwestern Electric Co.

Ordinance No. 30655. Sawdust bin and loading platform in Occident street, between Oregon street and East Irving street, for a period of five years. F. C. Stettler.

Ordinance No. 30695. Two rubber covered wires for private telephone from Lewis Building to Board of Trade Building in underground circuit. Kerr-Gifford & Co.

Ordinance No. 30803. Wig-wag crossing bells at First and Front streets and Front and Lane streets. Oregon & California Railroad.

Ordinance No. 30819, Overhead blowpipe across north Front street. Emerson Hardwood Co.

Ordinance No. 31004. Electrolier on Davis street in front of lot 7, block 45, Couch's Addition. H. W. Wallace.

Ordinance No. 31080. Four-inch water column at East First street and East Ash street. Oregon and California Railroad Co.

Keep trap doors open in walk at Journal building, between Broadway and Sixth streets.

Amusement park at Council Crest; Chas. A. Finley.

Ordinance No. 31287. Permit to stretch wires across Stark street, between Third and Fourth streets; Federal Telegraph Co.

Ordinance No. 31667. Operation of train for Giebisch & Joplin on Union avenue viaduct, between Union avenue and fill and East Main and East Water streets; Portland Railway, Light & Power Company.

Ordinance No. 31080. Water column on East First street, between East Ash and East Pine streets; Oregon & California Ry. Co.

Ordinance No. 31700. Marquise on Yamhill street, between First and Second streets; Strowbridge Estate.

Ordinance No. 31701. Conveyor on Ankeny street at corner of Ankeny and Front streets; The Spaulding Company.

Ordinance No. 31528. Two-inch steam pipe across Macadam street, south of Gains street; Fisher, Thorsen & Company.

Ordinance No. 32230. Temporary occupancy of Eighth street, on Eighth street between Glisan and Hoyt streets; Grant Fee.

Ordinance No. 31385. To occupy a portion of avenue with lumber shed (Sherlock avenue); Emerson Hardwood Company.

Ordinance No. 32158. Shelter shed on Overton street, between Tenth and Eleventh streets; Spokane, Portland & Seattle Ry. Co.

Permit to operate a blacksmith shop at Vancouver avenue and Ivy street; Karl Keller.

Ordinance No. 31115. To alter building at Fourth and Flanders streets; Ben Trenkman.

Ordinance No. 31215. One-story frame building on Overton street, between Fourteenth and Fifteenth streets; Lewis Investment Company.

BALANCES AND WARRANTS OUTSTANDING IN THE STREET IMPROVEMENT FUNDS, NOVEMBER 30, 1916

Ledger No. 2. Page		Warrants Outstanding	Balances
27.	Waverleigh Boulevard—East Twenty-eighth to East Thirty-seventh Street	$ 2,779.37	$.....
55.	First Street et al, Candor to Harrison Avenue	.41	.....
64.	Killingsworth Avenue—Patton to Willamette Boulevard	467.85	.....
103.	Twenty-first Street, Northrup Street to Sherlock Avenue	13.71	.....
114.	Jarret Street, Patton to Michigan Avenue	.36	.36
121.	Nineteenth Street, Overton to Wilson Street	2,545.52	.77
122.	Iowa Street, Front to Macadam Street	6.02	.....
156.	East Twelfth Street, Failing to Fremont Street	24.00	.....
191.	Tillamook Street, East Fourteenth Street to East Twenty-fourth Street	1,487.23	.07
195.	East Thirty-fifth Street, Hawthorne Avenue to Harrison Street	2.89	.....
276.	Hall Street, et al	12,549.36	265.70
295.	East Twenty-eighth Street, Wasco to Halsey St.	936.24	.....
296.	Halsey Street, Holladay's Add. to East Twenty-second	3,038.81	.....
302.	Division Street, East Tenth to East Forty-first Street	30.49	.....
335.	Corbett Street in Terwilliger Homestead	.....	3,279.58
349.	East Twenty-first Sreet, Division to Powell Street	2,672.11	.....
377.	East Sixteenth Street, Powell to Holgate	348.60	.....
384.	Knott Street, East Twenty-fourth to East Thirty-third Street	9.29	.....
384.	Concord, Jarrett Street to Ainsworth Avenue	4.51	.....
402.	Portions Mason, Rodney Mallory and Garfield Avenue	27.00	.02
425.	Sixty-seventh Street S. E., Powell Valley Road to Foster Road	2.41	.79
437.	Sumner Street, Vernon Avenue to East Thirtieth Street	11.95	11.95
446.	Portions of West Congress Street et al	.68	.....
449.	East Twenty-sixth Street, East Stark Street to East Burnside Street	211.79	.....
454.	Lombard Street—Westanna to Wabash Street	301.55	.25
488.	Hood Street, Grover and Macadam et al	292.41	.....
499.	Skidmore Street, et al	.....	.06
522.	Glenn Avenue, et al	252.47	.....
524.	Corbett Street et al	121.88	.....
533.	Kingston Avenue et al	197.73	.....
547.	Marguerite Avenue, Division to Hawthorne	6.51	.....
548.	Brandon Street, Lombard to Argyle	308.01	691.99
552.	Front Street Couch's Add. to Wilson's Add	5.05	.....
Ledger No. 3.			
1.	North Eighteenth, M Street to Sherlock Addn	86.44	.....
	Chapman Street, Jefferson to Taylor Street	1,052.91	.....
	South Front Street, Gaines to 1st Avenue	88.14	88.14
	South Second Street, Sheridan to Gibbs Street	251.52	.....
	Williams Avenue, Grant to Going Street	2,500.00	.....
	M Street, Fourth to Twelfth Street	68.37	68.37
	Fifth. Street, C. to I	65.34	65.34
2.	Water Street, planking	86.32	.....
	Clinton Street, Twenty-first to East Thirty-sixth Street	84.51	84.51
	Multnomah Street, Grover to Curry Street	952.34	.....
	Belmont Street, Water to East Thirty-fourth	12.00	12.00
	East Eighth Street, East Flanders to Riverside Homestead	1,025.53	.....

BALANCES AND WARRANTS OUTSTANDING IN THE STREET IMPROVEMENT FUNDS, NOVEMBER 30, 1916—Continued

Ledger No. 3. Page		Warrants Outstanding	Balances
2.	East Twenty-fourth Street, J. Irving's Add. to Tillamook Street	$ 29.96	$ 29.96
	Grand Avenue, East Clay to East Grant Street	1.47	1.47
	East Eighth Street, Ainsworth to Dekum Avenue	27.64	27.64
	Columbia Street, Third to Water Street	.77	.77
3.	Tacoma Avenue, Willamette River to East Sellwood	50.00	50.00
	Morrison Street, Front to Chapman	27.57	.....
	Grand Avenue, East Grant to Caruthers Street	21.40	.....
	Cable Street, Mill Street to Terrace Road	60.51	60.51
	Elm Street, Sixteenth to Chapman Street	3.75	3.75
	Hood Street, Sheridan to Curry	6.05	6.05
	Corbett Street	401.80	.....
	Davis Street, Twelfth to Fourteenth Street	2.90	2.90
	Union Avenue, 131 feet north of Broadway	37.78	37.78
	Stark Street, Seventh to Twelfth Streets	7.00	7.00
	Tenth Street, Hoyt to Northrup Streets	2,879.79	.....
4.	Rodney Avenue, Hancock to Knott Street	62.42	62.42
	Failing Street, Williams to Union Avenue	77.01	77.01
	Front Street, Second to 404 feet south	36.33	36.33
	First Street, Madison to Stark Street	183.59	183.31
	Sherman Street	.16	.16
	Kelley Street, Hamilton Avenue to Macadam Rd.	25.25	25.25
	Washington Street, B Street to City Park	9.48	9.48
	Fourth Street, Glisan to Jefferson Street	.05	.05
	Albina Avenue, Page to River	9,525.55	.....
5.	Third Street, Main to Glisan	5,593.59	.....
	Front Street, Arthur to Seymour	3,734.22	.31
	Macadam Street, Grover Street to Block 188	406.95	.....
6.	Hood Street, Fill at Sheridan	.....	.45
	Goldsmith Street, Albina Avenue to Russell Street	5,822.90	2.56
	Mississippi Avenue, Morris to Prescott Street	1,014.01	.....
7.	Union Avenue, Alberta Street to Love's D. L. C.	7,036.79	39.91
	Karl Street, Milwaukie Street to East Twentieth Street	1,954.51	8.65
	Shaver Street, Union Avenue to East Twelfth Street	227.64	.....
	Hooker Street, Third to Terminal in Hooker	310.98	.....
8.	Front Street, Fill at Lane	371.87	.....
	Corbett Street, Fill at Pennoyer	1.50	2.63
	First Street, Fill at Grover	.....	1.05
	Front Street at Woods	2.75	3.68
10.	Sixteenth Street, Washington to Thurman Street	52.08	52.08
	Weidler, First to Twenty-first Street	92.01	92.01
	Grand Avenue, East Stark to East Oak Street	1,180.86	1.02
	Colfax Street, Union to Garfield Street	5.39	5.39
	Denver Avenue, Killingsworth to Portland Boulevard	56.65	56.65
13.	Oak Street, Union Avenue to East Sixth Street	3,331.80	4.42
13.	Hibbard Street, Hibbard's Add. to B. L. Road	4.60	.....
	Thirteenth Street East, Leo to Malden Avenue	27.15	27.15
	Dekum Avenue, Piedmont to Columbia Heights	372.47	372.47
	Oak Street, Fourth to Sixth Street	42.00	.....
14.	Frankfort Street, Milwaukie Street to Feurer's Add.	373.76	133.15
	Goldsmith Street, Irvings D. L. C. to Albina Avenue	101.43	.....
31.	East Fifteenth, Clinton to O. & C. Right of Way	139.60	.....
	Twenty-first, Carter Street to Vista Avenue	1,264.01	.....
46.	East one-half of East Twenty-ninth Street, Regends Drive to Shaver	1,717.85	39.34
48.	Milwaukie Street, Holgate to Nehalem Street	863.58	.....
79.	East Tenth, Benedictine Heights to Lofty View	106.05	.....

BALANCES AND WARRANTS OUTSTANDING IN THE STREET IMPROVEMENT FUNDS, NOVEMBER 30, 1916—Continued

Ledger No. 3. Page		Warrants Outstanding	Balances
100.	S. W. one-half of Front Street, Watson's to Sherlock Add.	$ 34.99	$.....
102.	East Forty-sixth Street et al, District No. 249....	317.17	.....
104.	Holgate Street et al, District No. 190.....	7,944.17	153.15
119.	Rhone Street, East Seventh to Milwaukie Street	158.11	.....
129.	East Burnside Street, East Eighty-second to East Ninetieth Street.....	463.71	.....
145.	Kingston Avenue et al.....	15,959.77	261.87
151.	Fremont Street, East Eighth to East Thirty-third Street	330.00	11.28
158.	Pendleton Avenue et al—District 288.....	1,103.07	.....
169.	Willamette Boulevard, Wabash Avenue to Carey Boulevard	193.51	.....
171.	East Stark Street et al, District No. 253.....	215.24	.....
173.	East Glisan Street, East Eighty-second Street to East Ninety-second Street.....	189.18	.....
183.	Edison Street, Fessenden Street to St. Johns Ave.	.....	6.16
	Jersey Street, Catlin to Richmond Street.....	20.50	25.88
	Burlington Street, Bradford Street Jas. Johns 2d	451.73	49.60
185.	Fessenden Street, Jersey Street to Smith's Ave.	.....	1.04
	Fessenden Street, Oswego Street to Smith's Ave.	577.21	26.58
	Central Avenue, John Street to Buchanan Street	141.41	.....
186.	Willamette Boulevard, Richmond Street to S. P. & S. R. of W.....	175.19	.....
196.	East Seventieth Street S. E., Sixty-third Avenue to Sixty-fifth Avenue S. E.....	.80	.....
	Whitman Avenue, Seventy-second Street to Sixty-eighth Street.....	4.68	.42
	Weidler Street, East 1st Street to Wheeler Street	1.98	.....
204.	Knott Street, East Twenty-ninth Street to East Thirty-third Street	19.53	.....
205.	Portions of Saratoga Street et al.....	87.48	13.16
212.	Hamilton Avenue, Third to Fourth Streets.....	10.82	.....
221.	Portions of East Harrison Street in Ladd Addn.	1,400.00	213.01
236.	Upper Drive, in Smith's Addition.....	10,273.50	.....
239.	East Glisan, East Forty-fourth to East Sixtieth Street	1,892.27	.....
240.	Brazee Street, Twenty-seventh to Twenty-eighth Street	87.79	6.96
249.	Swenson Street, Myers Street to Oswego Street	65.40	.....
	Macadam Street, Lowell Avenue to N. L. of Sec. 15	21.00	.....
255.	Lamson Avenue et al.....	4,269.11	3.06
256.	East Seventy-fourth Street et al, District No. 326	993.39	.01
258.	East Twenty-ninth Avenue S. E. et al, District No. 290	7.85	.....
	Forty-first S. E., Woodstock Avenue to Henry's Fifth Addition	44.97	.....
264.	Montgomery Drive, Clifton to Lent's Addition....	3.65	.40
268.	Ladd Avenue, District No. 365.....	.....	824.31
279.	Jessup Street, Willamette Boulevard to Delaware Avenue	.34	.....
280.	Oswego Street, Northland Boulevard to Barton's Addition	6.29	1.00
281.	Jersey Street, Fessenden to Richmond.....	104.99	.....
283.	Whitwood Street, Linnton	2.00	194.64
	Whitwood Sidewalk	.....	8.32
	Glenn Harbor Boulevard.....	153.08	31.20
284.	Richmond Street	.....	49.00
	Fessenden Street	138.23	222.49
286.	Macrum Avenue	149.79	.....
289.	Eugene Street, Williams Avenue to Union Avenue	19.29	.....
300.	East Glisan, Sixtieth to Seventy-fifth Street.....	374.71	1.64

BALANCES AND WARRANTS OUTSTANDING IN THE STREET IMPROVEMENT FUNDS, NOVEMBER 30, 1916—Continued

Ledger No. 3. Page		Warrants Outstanding	Balances
302.	Thompson Street, East Twenty-seventh to East Twenty-eighth Street	$ 15.84	$.....
305.	East Forty-second Street, East Taylor to Belmont Street	43.06	40.52
	Schiller Street, Milwaukie to East Eighteenth St.	204.17	204.17
308.	Fiftieth Avenue, Seventy-fourth to Eighty-second Street S. E.	684.39	3.09
311.	Hillside Boulevard, Portland Br. Co. to Germantown Road	98,303.31	.....
313.	East First Street, East Irving to Oregon Street	58.75	58.75
	Gibbs Street, First to Second Street	327.79	327.79
	Peninsular Avenue, Lombard Street to Columbia Slough Road	12.67	.01
319.	Portions of Twenty-eighth, Upshur and Twenty-ninth Streets	885.72	876.87
	Baldwin Street, Washbyrne Street to Wabash Avenue	200.00	200.00
320.	Beacon Street, Milwaukie Street to East Fourteenth Street	1,371.58	12.50
321.	Mill Street, Fourteenth Street to Chapman Street	323.38	323.38
	East one-half of Seventy-sixth Street, East Main to Yamhill Street	268.86	261.71
	Alberta Street, East Thirtieth to East Thirty-third Street	4,829.27	4,829.27
322.	East Thirty-ninth and East Kelley Streets	5,220.94	779.13
	Corbett and Custer Streets	4,415.06	9.12
323.	East Forty-eighth Street, Belmont to East Yamhill Street	829.46	2.06
	East Thrity-second Street, Francis Avenue to Cooper's Addition	279.19	.....
	East Twenty-seventh Street, East Everett Street to Logans Addition	1,610.63	107.36
324.	East Seventh Street, Clackamas to Schuyler St.	1,891.42	.30
	Union Avenue, East Madison to East Main Street	275.04	.....
	Forty-fifth Avenue S. E., Sixty-seventh to Seventy-ninth Street, S. E.	5,834.78	287.91
325.	East Glisan and East Twenty-sixth Street	3,929.83	40.00
	East Sixty-first, East Stark to Burnside Street	3,850.68	179.97
326.	East Thirty-ninth Street, East Main to East Salmon Street	419.14	94.12
	East Fifteenth tSreet, Alberta to Prescott Street	5,621.03	148.37
	Tenino Avenue, East Seventeenth to East Twenty-first Street	1,705.35	9.62
	Blandena Street, Erwin to Patton Street	530.34	39.39
327.	East Thirty-third Street, Hancock to Tillamook Street	627.50	.....
	East Main Street, East Forty-first Street to East Forty-fourth Street	3,492.09	1.77
	Ainsworth Avenue, Ninth to Tenth	1,717.90	19.45
	Ainsworth Ave, Union Avenue to East Ninth St.	9,710.02	54.04
	Sandy Blvd., Hyde Park to East Eighty-second Street	7,213.60	194.57
	Elimination of Grade Crossings, Sandy Blvd. and East Forty-fifth Street	.....	360.00
	East Twenty-eighth Street, Kenilworth Avenue to East Thirty-first Street	36,302.94	1.63
330.	East Stark Street and East Thirty-ninth Street	770.44	62.34
331.	Harrison Street, 14th Street and west therefrom	755.49	51.44
	Miller Avenue, Milwaukie Street to East Twenty-first Street	1,911.42	8.99
333.	East Tenth, Going to Alberta Street	3,231.07	205.08
	Portions of Summit Drive et al	7,472.36	.....
	Upper Drive, Montgomery Drive to Smith's Addn.	3,282.34	65.49

BALANCES AND WARRANTS OUTSTANDING IN THE STREET IMPROVEMENT FUNDS, NOVEMBER 30, 1916—Continued

Ledger No. 3		
334. East Thirteenth and Bybee Avenue	$ 24,849.94	$ 736.49
Forty-eighth Street S. E., Division Street to Twenty-ninth Avenue S. E.	5,745.03	247.80
East Eighth Street, Going Street to Alberta Street	6,169.13	80.87
East Sixth Street, Broadway to Schuyler Street	1,413.11	.....
Bybee Avenue, East Twenty-second Street to S. P. Co.'s right of way	9,731.39	.....
	$401,362.21	$19,065.21

BALANCES AND WARRANTS OUTSTANDING IN THE SEWER FUNDS NOVEMBER 30, 1916.

Ledger No. 2 Page		Warrants Outstanding	Balances
600.	Brooklyn District Sewer	$ 443.28	$.....
652.	Marquam Gulch District Sewer	8.80	.....
675.	Milwaukie Street and East 17th Street Sewer System	2.70	.....
695.	Wood Street Gulch Sewer	.....	20.00
698.	East Twentieth Street District, et al	.80	.....
720.	North Branch of Brooklyn District Sewer	138.50	.....
727.	The Westmoreland Sewer System	11.00	.....
762.	Riverside District Sewer	9,872.00	16.70
775.	Holgate Ext. S. Branch Brooklyn District	93.55	2,400.05
787.	Rhine St. Ext. S. Branch Brooklyn District	3.75	.....
794.	East Stark Street Trunk Sewer No. 1	193.20	40.26
Ledger No. 3			
Page			
500.	Whitaker Street, Kelley Street to Thomas Creek	92.00	.....
	First Street, Whitaker to Grover	34.16	.....
	Cook Avenue District	250.00	.....
	Williams Avenue, Alberta to Fremont	42.00	.....
	Tanner Creek	300.00	51.04
	Irvington District Sewer	147.24	1.64
	Division Street, Sixth Street to Willamette River	.10	.....
513.	Seventy-ninth, Burnside to Glisan	120.15	120.15
516.	Sullivan's Gulch Trunk Sewer No. 1	1.60	.....
526.	East Stark Street Trunk Sewer No. 2	208.60	5.50
546.	Sullivan's Gulch Trunk Sewer No. 2	6.60	6.60
556.	East Thirty-third Street Extension of Sullivan's Gulch	1,625.00	4.60
572.	The Canyon Road Extension of Tanner Creek	33.60	2.40
605.	An Extension of Marquam Gulch Sewer	321.40	.....
610.	East Thirty-first Street Sewer System, District No. 9	1.00	1.00
616.	East Fifty-second Street Sewer System	479.60	.03
624.	East Forty-ninth and East Hoyt Street	700.00	4.85
635.	Lambert Avenue Sewer System	63.35	.....
637.	East Sixty-third Street Extension of East Stark Street Sewer	611.03	.....
666.	Long Avenue and Forty-fifth Street, S. E. System	39.56	.....
672.	Long Avenue Extension of Holgate Sewer	18.48	.....
677.	Extension of the Rhine Street Sewer	405.00	54.55
681.	East Sixty-eighth Street, East Flanders Street to East Davis	599.36	49.95
	Montgomery Drive and private property	1,136.31	24.09
682.	Willow Street and East Eighty-second Street Sewer District No. 31	631.41	1.00
685.	East Davis and East Seventy-second Street System	223.40	48.00
686	East Sixty-fifth and East Burnside Street System	100.00	100.00
687.	Water and Mill Streets	2,503.09	1,018.47
	East Eightieth and East Burnside	279.93	120.92
	East Eightieth, North Villa to East Glisan	290.51	289.76
690.	East Fiftieth and East Couch Street System	137.70	.....
692.	East Seventy-ninth, East Eightieth and East Pine Streets	2,230.82	47.57
	Burlington Street, St. Johns	.....	7.81
	Philadelphia Street, St. Johns	.....	3.21
692.	Linnton Sewer No. 1	.....	4.30
	Sanitary System No. 1, Linnton	.....	147.50
694.	Nehalem Avenue	296.07	32.02
696.	East Thirty-third Street, East Thirty-fourth to Francis Avenue	200.00	160.00
697.	East Yamhill Street, East Seventy-sixth to East Seventy-eighth Street	4.93	.....

BALANCES AND WARRANTS OUTSTANDING IN THE SEWER FUNDS NOVEMBER 30, 1916—Continued

Ledger No. 3 Page		Warrants Outstanding	Balances
697.	East Fighty-third Street, East Davis to East Glisan Streets	62.80	$ 26.80
	East Twenty-eighth Street, District No. 70	25.00	25.00
698.	East Alder Street, East Second to Willamette River	16.74	12.53
702.	Forty-third Street S. E., Powell Valley Road to Twenty-ninth Avenue S. E.	1,047.65	.....
	Second Street, Grover to Woods	113.57	25.10
	Claybourne Avenue and East Sixteenth Street	547.28	47.02
703.	East Seventeenth Street, Wygant Street and East Seventeenth Street	322.20	20.88
	East Thirty-second, Francis Avenue to Cooper's Add.	668.46	41.78
704.	Schuyler Street to East Sixth Street	889.93	.....
		$28,595.21	$ 4,983.08

BALANCES AND WARRANTS OUTSTANDING IN THE STREET EXTENSION FUNDS NOVEMBER 30, 1916

Ledger No. 2 Page		Warrants Outstanding	Balances
901.	Killingsworth Avenue	$ 11.50	$ 11.50
904.	East Thirteenth St., Millers Add. to Rural Ave.	11.00	11.00
905.	Thompson Street, East Twenty-fourth to East Thirty-third Street	50.00	50.00
	East Taylor Street, Paradise Springs Tract to East Forty-fifth Street	25.00	25.00
909.	Vila Avenue, Section 32 to Mt. Tabor Avenue	57.00	57.00
916.	Cactus Drive, Cedar Hill to 55 feet East	530.00	530.00
919.	East Sherman Street, Park View Annex to Marguerita Avenue	4.10	4.10
921.	East Forty-second Street and Hawthorne Avenue	1.00	1.00
	East Forty-third Street and Hawthorne Avenue	1.00	1.00
924.	Malden Avenue, East Thirteenth to Milwaukie Road	1.00	1.00
	East Forty-first Street in Hawthorne Avenue Addition	1.00	1.00
	East Forty-eighth Street in Hawthorne Avenue Addition	1.00	1.00
	East Forty-seventh Street in Hawthorne Avenue Addition	1.00	1.00
926.	Belmont Street, Sec. 6 to East Sixty-ninth Street	3.00	3.00
	Lombard Street, Patton to Wabash Avenue	122.00	126.00
929.	Harrison Street, Block "Z" City to Sixteenth St.	.....	3.00
948.	Sandy Road to east line of City	203.20	203.20
957.	East Twenty-sixth Street, Division Street to Simons Addition	12.20	12.20
959.	Claremont Street	2.00	2.00
960.	Villa Avenue	60.00	60.00
970.	New Street, Fiftieth to Sixtieth	9.00	9.00
973.	East Eightieth Street, Base Line Road to Hawthorne Avenue	5.00	4.95
975.	East Glisan Street, Wiberg Land to East Sixtieth Street	1.00	51.00

BALANCES AND WARRANTS OUTSTANDING IN THE STREET EXTENSION FUNDS NOVEMBER 30, 1916—Continued

Ledger No. 3 Page		Warrants Outstanding	Balances
800.	Forty-fifth Street, Block B to Hawthorne Avenue Addition	1.00	1.00
	Forty-sixth Street, Block B to Hawthorne Avenue Addition	1.00	1.00
	Wisconsin Street, B. 17 S. Portland to B. 48 Fulton Park	.....	4.70
	East Twentieth Street, Insley Avenue to Zanita Avenue	2.00	2.00
	East Forty-fourth Street N. to S. line lot C, Hawthorne Avenue Addition	1.00	1.00
	South Fourth Street	150.00	.....
801.	Heights Terrace	.....	60.00
	Clinton Street, East Thirty-sixth Street to East Thirty-seventh Street	.....	73.68
	St. Helens Road, East Twenty-ninth to Front St.	.....	110.15
	Belmont Street, Prettyman Avenue to City Limits	.....	6.00
	East Seventeenth Street. Highland Park to Howe Street	10.00	10.00
820.	East Twenty-seventh Street, lot SE Portland Heights to Ellsworth Street	117.80	117.80
	Pearl Street, Mt. Tabor Villa Annex to Hibbard Street	.....	33.00
	East Seventeenth Street, Block Midway Annex to Yukon Avenue	366.50	366.50
838.	Fessenden Street, Jersey Street to City Limits	.....	9.95
842.	Widening of Washington Street	.....	2,080.50
843.	Widening of East Forty-fifth Street	.....	89.77
	Widening and Extending East Fifty-eighth Street	.....	31.75
844.	Broadway Street, Sandy Boulevard to East Forty-fifth Street	.....	1,600.85
	Madrona Street	.....	1,450.00
	Change of Grade, Nicolai Street	.....	2,320.00
846.	Halsey Street	.....	3,787.09
	Oregon Street, York Addition to East Twenty-ninth Street	.....	346.95
		$ 1,761.30	$13,672.64

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